



STATE OF HAWAII
DEPARTMENT OF HEALTH
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WRITTEN TESTIMONY ONLY

Testimony COMMENTING on S.B. 1150, S.D.2, H.D.2

RELATING TO PRESERVING CORAL REEFS

REPRESENTATIVE ROY M. TAKUMI, CHAIR
REPRESENTATIVE LINDA ICHIYAMA, VICE CHAIR
HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE

Hearing Date: March 30, 2017
Time: 2:00 P.M.

Room Number: 329

1 **Fiscal Implications:** No funding is provided to implement this measure.

2 **Department Testimony:** S.B. 1150, S.D. 2, H.D. 2 seeks to prohibit the use and sale of non-
3 prescription products containing oxybenzone and other chemicals deemed harmful by DLNR
4 within a marine life conservation district. We defer to the Department of Land and Natural
5 Resources about the feasibility of implementing a prohibition on the use and sale of certain
6 sunscreens within marine conservation districts in Hawaii.

7 The Department of Health is concerned about the release of chemicals, including oxybenzone,
8 from personal care products into the marine environment. Research by local and national coral
9 experts has shown that levels of oxybenzone in the marine environment may be high enough to
10 pose deleterious effects on coral, and may exacerbate coral bleaching. However, oxybenzone
11 plays an important role in reducing the risk of some forms of skin cancer, so balancing public
12 health protection here in Hawaii is a very important consideration. DOH believes more
13 evaluation of the unintended health effects of restricting the use of oxybenzone is warranted. A
14 key concern from the public health perspective is the availability and user acceptance of safe,
15 affordable and effective alternatives. Sunblocks containing titanium dioxide and zinc oxide are
16 alternatives to oxybenzone, but today, represent only a small percentage of the sunscreen market.
17 In addition, titanium dioxide has been classified as a possible carcinogen when inhaled in high
18 doses. Nanoparticle of zinc oxide and titanium dioxide used in transparent sublocks also wash

1 off skin, entering the aquatic environment with unknown effects on our tropical marine
2 ecosystems.

3 The Department is not aware of any impending federal or state regulations to remove or restrict
4 oxybenzone or related chemicals from sunscreens, or voluntary reformulation of popular
5 products by major sunscreen manufacturers to offer consumers “reef safe” alternatives. We
6 strongly support DLNR’s public education efforts and outreach strategies to reach out inform
7 Hawaii beachgoers about steps that they can take to reduce the unintended impacts of
8 oxybenzone use while safely enjoying our tropical marine waters and sunny beaches throughout
9 Hawaii. The Department also supports research into academic research further investigating the
10 fate and environmental effects of oxybenzone and other sunscreen compounds in the nearshore
11 marine environment.

12 Thank you for the opportunity to testify on this important measure.

13 **Offered Amendments:** None.

DAVID Y. IGE
GOVERNOR OF HAWAII



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

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

**Testimony of
SUZANNE D. CASE
Chairperson**

**Before the House Committee on
CONSUMER PROTECTION AND COMMERCE**

**Thursday, March 30, 2017
2:00 PM
State Capitol, Conference Room 329**

**In consideration of
SENATE BILL 1150, SENATE DRAFT 2, HOUSE DRAFT 2
RELATING TO PRESERVING CORAL REEFS**

Senate Bill 1150, Senate Draft 2, House Draft 2 proposes to (1) prohibit the use or application of sunscreen, sunblock, or cosmetic containing oxybenzone or other chemicals deemed harmful to coral reefs by the Department of Land and Natural Resources (Department) within a marine life conservation district unless the sunscreen, sunblock, or cosmetic is a prescription drug; (2) require all commercial use permittees operating in marine life conservation districts to inform their customers that the use or application of sunscreen, sunblock, or cosmetic containing oxybenzone or other chemicals deemed harmful to coral reefs by the Department is prohibited in marine life conservation districts; (3) require certain counties to prohibit the commercial sale of sunscreen, sunblock, or cosmetic containing oxybenzone or other chemicals deemed harmful to coral reefs by the Department in concessions that serve nature preserves and marine life conservation districts; and (4) allow the Department to propose rules prohibiting the use of sunscreen, sunblock, or cosmetic containing oxybenzone in any area as needed. **The Department opposes this measure as drafted but appreciates the intent. As written, this measure is impossible to implement and is unenforceable.**

The Department recognizes that a legal ban on the use of oxybenzone would have a deterrent effect on people who are aware of the ban and are inclined to obey it. However, the ban would create public expectations for enforcement that would be unrealistic for the Department to be able to meet. Thus, the Department has serious concerns about how the measure would be implemented and enforced in a manner that would be meaningful or effective. An enforcement officer would have to observe a person on the beach or in a boat applying the product and then determine if the product contained oxybenzone or some other chemical that has been found to be harmful to corals. Even if use of these products were decriminalized by making their use a civil crime, it would still relegate

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

KEKOA KALUHIWA
FIRST DEPUTY

JEFFREY T. PEARSON P.E.
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

the Department's Division of Conservation and Resources Enforcement officers who are enforcing the measure to being "sunscreen police." Imagine officers ticketing those on the beach or in a boat for applying sunscreens—and how the courts would view crime! That would certainly detract from their other duties and responsibilities to enforce State laws related to natural resources damages.

While the Department supports the use of sunscreens and similar products for protection from the harmful effects of the sun, the public needs to be better informed so they can make better choices regarding sun protection and reef conservation. The Department strongly supports an informational approach as an alternative to a regulatory approach to help the public understand the issues and potential hazards to using products containing oxybenzone and other chemicals in sunscreens and the need for more public outreach.

Many commercial tour operators already inform their customers that oxybenzone and other chemicals in sunscreens may be harmful to coral reefs and some even provide alternatives, which we strongly support. Although the State's Marine Life Conservation Districts (MLCDs) contain some of the most valuable aquatic resources in the State and perhaps deserve higher degrees of protection than other areas, the MLCDs include only a small fraction of our coral reefs – **only 11 MLCDs exist, on four islands, covering less than 1% of Hawai'i's reefs.** There is no reason why the Department should not urge commercial tour operators, charter boat captains, guides and others to inform their customers and clients of the potential harm caused by these chemicals to corals for all reefs in Hawai'i. This should be a statewide educational and outreach program.

To date, the Department's outreach efforts to provide public outreach have included organizing a session at the 2016 International Union for Conservation of Nature Conference on the effects and use of oxybenzone, focused one-on-one outreach at 'Āhihi-Kīna'u Natural Area Reserve (a very valuable and popular reef on Maui that is not an MLCD), news releases, and videos. Information on the hazards of oxybenzone is also on the Department's Division of Aquatic Resources (DAR) website. DAR also distributes oxybenzone-free sunscreen samples at public events, and urges partner organizations, dermatologists, boat tour operators, and vendors who sell sunscreen to spread the word. These efforts are just the beginning, and there is certainly more that can and should be done to inform ocean users.

The Department respectfully suggests that this measure be deferred and that the legislature support expanding efforts to inform the public on such matters.

Thank you for the opportunity to comment on this measure.



SB1150 SD2 HD2
RELATING TO PRESERVING CORAL REEFS
House Committee on Consumer Protection and Commerce

March 30, 2017

2:00 p.m.

Room 329

The Office of Hawaiian Affairs (OHA) **SUPPORTS** SB1150 SD2 HD2, which would mitigate the impacts of oxybenzone on our coral reefs.

Hawai'i's marine environment and nearshore resources serve as a cultural, socioeconomic, and scientific foundation for our islands. OHA notes that economic studies in 2002 and 2003 found an overall contribution of \$800 million in revenue generated from our coral reefs and coastal resources, with an added recreational, amenity, fishery, biodiversity and educational value of \$364 million per year. A more recent report released in 2011 utilizing "innovative economic survey techniques" found that across U.S. households, the economic value of protecting Hawai'i's nearshore environment could be estimated at \$34 billion a year. While our ocean waters clearly hold cultural, spiritual, and biological significance beyond any monetary value, these economic analyses clearly reflect the critical nature of our marine environment to our islands.¹

This measure represents a small step towards ensuring greater resilience in our coral reefs and nearshore waters. With the overarching threats of climate change and a growing population base, it is incumbent upon the state and its residents to ensure that our foundational nearshore resources are sufficiently resilient, to best withstand the inevitably increasing pressures that will be placed upon them. While oxybenzone is just one of many stressors on our coral reefs, reducing the prevalence of this known chemical threat is a small yet positive step towards ensuring such greater resilience. Notably, this measure

¹ See Carlie S. Weiner, Mark D. Needham, & Paul Wilkinson, Hawaii's real marine life park: interpretation and impacts of commercial marine tourism in the Hawaiian Islands, 12 CURRENT ISSUES IN TOURISM 489, 489-90 (2009) citing P.J. van Beukering & H.S. Cesar, Ecological economic modeling of coral reefs: Evaluating tourist overuse at Hanauma Bay and algae blooms at the Kihei Coast, Hawai'i 58 PAC. SCIENCE 243 (2007); A.M. Friedlander et. al., The state of coral reef ecosystems of the main Hawaiian Islands in THE STATE OF CORAL REEF ECOSYSTEMS IN THE UNITED STATES AND PACIFIC FREELY ASSOCIATED STATES 222-269 (2005), K. DAVIDSON, M. HAMNET, & C. MINATO, ECONOMIC VALUE OF HAWAII'S NEARSHORE REEFS (2003), available at [http://nature.forestry.oregonstate.edu/sites/default/files/2009-2%20CIT%20-%20Wiener%20Needham%20Wilkinson%20\(2009\).pdf](http://nature.forestry.oregonstate.edu/sites/default/files/2009-2%20CIT%20-%20Wiener%20Needham%20Wilkinson%20(2009).pdf); HERMAN CESAR ET. AL, ECONOMIC VALUATION OF THE CORAL REEFS OF HAWAII FINAL REPORT 74 (2002), available at http://www.coralreef.gov/meeting18/evhcri_samoa_2007.pdf; RICHARD C. BISHOP ET. AL., TOTAL ECONOMIC VALUE FOR PROTECTING AND RESTORING HAWAIIAN CORAL REEF ECOSYSTEMS: EXECUTIVE SUMMARY (2011), available at http://coralreef.noaa.gov/aboutcrp/news/featuredstories/oct11/hi_value/resources/protecting_restoring_hawaiian_cre.pdf.

may not only directly reduce the impacts of oxybenzone on our most popular nearshore areas, but its passage may also promote greater public awareness of the need to better protect the resources we so substantially rely upon.

Accordingly, OHA urges the Committee to **PASS** SB1150 SD2 HD2. Thank you for the opportunity to testify on this measure.

Harry Kim
Mayor



Wil Okabe
Managing Director

Barbara J. Kossow
Deputy Managing Director

County of Hawai'i
Office of the Mayor

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March 29, 2017

Rep. Roy M. Takumi, Chair
Committee on Consumer Protection &
Commerce
Hawai'i State Capitol
Honolulu, HI 96813

Dear Chair Takumi and Committee Members:

**RE: SB 1150, SD 2, HD 2
Relating to Preserving Coral Reefs (sunscreen)**

If there is a scientific consensus that sunscreen containing oxybenzone is harmful to the environment, and that it is worse than the alternative sunscreen products available, I would urge the Legislature to ban the sale in Hawaii of products containing oxybenzone. That would not eliminate the problem entirely (tourists might still bring product in) but I would think that the use of the chemical in Hawaii would be dramatically reduced, far more than an education program ever could accomplish. And such a prohibition on sale would resolve the law enforcement problem faced by DLNR if it tries to prevent use by individual boaters or beachgoers.

However, your decision should be based on science, and the Department of Health's earlier testimony, on this bill and the House companion, suggests that science may not be ready to make that call.

If the Committee believes there is enough evidence on which to act, I would urge the Legislature to use SB1150 as an appropriate vehicle to forcefully address the problem, as suggested above. If, on the other hand, you do not feel you have enough facts, then providing for a study, one that could generate more information, is worthy of your approval.

Respectfully submitted,


for Harry Kim
Mayor



March 29, 2017

To:

Chairman Rep. Takumi & Rep. Committee Members
Committee on Consumer Protection and Commerce
State of Hawai'i House of Representatives, The Twenty-ninth Legislature

Dear Chairman Takumi and the Committee Members,

My name is Caroline Duell, and I am the CEO of All Good, makers of organic body care products. We believe it is our responsibility to offer alternatives to harmful ingredients and we would like to urge you to pass SB 1150 restricting oxybenzone sunscreen use in Marine Life Protection areas and sales of oxybenzone sunscreens at concessions serving Hanauma Bay and other MLPAs. There are enough studies showing the negative impact sunscreens containing oxybenzone are having on our reefs; we need to protect them now, before it is too late. Our reefs not only support life in Hawaii, but equate to \$360 million directly to the state's economy (more indirectly). There are better ways to protect from UV rays without putting our reefs and health at risk.

Preventing oxybenzone pollution of coral reefs is critical in protecting and bringing back Hawaii's already degrading coral reefs. We now know that oxybenzone impacts not just coral larvae and recruitment, it impacts other important species such as shrimp, fish, and sea urchins. Already, popular tourism areas that were beaming with life only 20 years ago are now an underwater-wasteland. We see oxybenzone contaminating the fish that we eat in Hawaiian waters. Preventing oxybenzone pollution is an important tool to helping bring back coral and marine life, to be valued not just by residents, but tourists and the businesses that depend on the underwater paradise of Hawai'i.

We strongly encourage this committee to amend the bill to "**PROHIBIT THE SALE**" of oxybenzone products, similar to the language found in SB260, allowing for a medical prescription to be used. We know that public health is important, and we don't see a trade-off in protecting both public health and wildlife. There are ample commercial sunscreen products that contain safer active ingredients other than oxybenzone, and these products are sold by the majority of the manufacturers that distribute their products in Hawaii. These safer ingredients all comply with U.S. Food & Drug Administration's regulations on SPF values and UV protection and are cost-competitive to oxybenzone products.

Thank you for your vote for the oceans.

Ua Mau ke Ea o ka Aina i ka Pono

Mahalo, Caroline Duell
CEO, All Good

March 30, 2017

The Honorable Roy M. Takumi
Chair, Committee on Consumer Protection and Commerce
Hawaii House of Representatives
Hawaii State Capitol, Room 320
Honolulu, HI 96813

Dear Chairman Takumi:

On behalf of the more than 13,500 U.S. members of the American Academy of Dermatology Association ("Academy"), we write to oppose SB 1150, legislation which would prohibit the use or application of sunscreen, sunblock, or cosmetics containing oxybenzone or other chemicals deemed harmful to coral reefs by the Department of Land and Natural Resources within a marine life conservation district. As dermatologists, we dedicate our lives to promoting habits in our patients that ensure healthy skin. Ultraviolet radiation damages the skin's DNA, which is the beginning stage of skin cancer. AADA is concerned about policies that would remove access to sunscreens containing oxybenzone, a necessary ingredient for broad-spectrum sunscreens, thereby putting the public at increased risk of developing skin cancer. We urge you and your colleagues to oppose SB 1150 to protect Hawaii residents and visitors from the dangers of sun exposure without adequate protection.

While multiple factors are contributing to the damage of our beautiful planet, the current scientific evidence on the effects of oxybenzone on coral reefs is not sufficient to establish a link. The only study claiming oxybenzone could be harmful to coral is based upon laboratory research, which does not accurately simulate the complex natural marine environment.¹ According to a recent review of the ecological risks of oxybenzone, systematic monitoring and thorough toxicological studies are needed to better understand the risks of this ingredient in the aquatic environment.² The National Oceanic and Atmospheric Administration (NOAA) cites increased ocean temperatures, storm-generated runoff, overexposure to sunlight, and extremely low tides as contributors to the problem of coral bleaching.³ The Great Barrier Reef Marine Park Authority of Australia conducted a study in 2016 that not only reported coral bleaching in remote areas unfrequented by human contact, but points to rising ocean temperatures as the main suspected cause.⁴

¹ Downs CA, Kramarsky-Winter E, Segal R, Fauth J, Knutson S, Bronstein O, Ciner FR, Jeger R, Lichtenfeld Y, Woodley CM, Pennington P. Toxicopathological effects of the sunscreen UV filter, Oxybenzone (Benzophenone-3), on coral planulae and cultured primary cells and its environmental contamination in Hawaii and the US Virgin Islands. Archives of environmental contamination and toxicology. 2016 Feb 1;70(2):265-88.

² Kim S, Choi K. Occurrences, toxicities, and ecological risks of benzophenone-3, a common component of organic sunscreen products: a mini-review. Environment international. 2014 Sep 30;70:143-57.

³ National Oceanic and Atmospheric Administration. What is Coral Bleaching?.

http://oceanservice.noaa.gov/facts/coral_bleach.html

⁴ Great Barrier Reef Marine Park Authority 2016, Interim report: 2016 coral bleaching event on the Great Barrier Reef, GBRMPA, Townsville.



American Academy of Dermatology Association
Excellence in Dermatology™

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Elaine Weiss
Executive Director and CEO

Oxybenzone is one of the few FDA-approved sunscreen ingredients that provides broad-spectrum protection from the sun's harmful UVA and UVB rays. UVA damages deeper layers of the skin and contributes to the development of melanoma, the deadliest form of skin cancer. UVB is the primary cause of sunburn and plays a key role in the development of skin cancer in the skin's more superficial layers. In addition, both types of rays can cause suppression of the immune system.⁵

Unprotected sun exposure is the most preventable risk factor for skin cancer. According to current estimates, at least one in five Americans will develop skin cancer in their lifetime.^{6 7} Melanoma, the deadliest form of skin cancer, is now the second most common form of cancer for females aged 15-29 years old, and Caucasian men over 50 years of age are at a higher risk of developing melanoma than the general population.^{8 9 10 11} In Hawaii alone, 460 new cases of melanoma will be diagnosed in 2017.¹² Further, Hawaii has the highest rate of new melanoma diagnoses in the United States among Caucasians and the rate of new melanoma diagnoses among Caucasians is nearly triple the national average. Melanoma has the third fastest rising death rate among cancers in Hawaii, and the death rate from melanoma in Hawaii is more than 30% higher than the national average.¹³

Dermatologists have an interest in patient and public access to safe and effective sunscreen ingredients. The U.S. Food and Drug Administration (FDA) is currently considering eight time-and-extent applications (TEAs) for new sunscreen ingredients to be added to the FDA over-the-counter (OTC) monograph. This issue highlights the need for new safe and effective ingredients to be introduced in the United States. With the approval of ingredients that utilize alternative UV filters available to sunscreen manufacturers, the public's health will be protected. Should scientific evidence on the effects of oxybenzone on coral reefs demonstrate a stronger link, concerns about preserving the environment can be allayed.

If Hawaii removes access or attaches stigma to sunscreens containing oxybenzone, an ingredient necessary for broad spectrum protection, the public will be placed at an even greater risk for skin cancer. I urge you and your colleagues to oppose SB 1150. I appreciate the opportunity to provide written comments on this important public

⁵ Lim HW, James WD, Rigel DS, Maloney ME, Spencer JM, Bhushan R. Adverse effects of ultraviolet radiation from the use of indoor tanning equipment: time to ban the tan. *Journal of the American Academy of Dermatology*. 2011 Apr 30;64(4):e51-60.

⁶ Stern RS. Prevalence of a history of skin cancer in 2007: results of an incidence-based model. *Arch Dermatol*. 2010 Mar;146(3):279-82.

⁷ Robinson JK. Sun Exposure, Sun Protection, and Vitamin D. *JAMA* 2005; 294: 1541-43.

⁸ American Cancer Society. *Cancer Facts & Figures 2017*. Atlanta: American Cancer Society; 2017.

⁹ Siegel RL, Miller KD, Jemal A. *Cancer statistics, 2017*. *CA Cancer J Clin*. 2017; 67:7-30.

¹⁰ Little EG, Eide MJ. Update on the current state of melanoma incidence. *Dermatol Clin*. 2012;30(3):355-61.

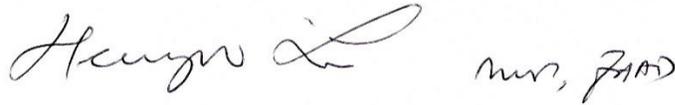
¹¹ NAACCR Fast Stats: An interactive quick tool for quick access to key NAACCR cancer statistics. North American Association of Central Cancer Registries. <http://www.naacr.org/>. (Accessed on 3-10-2016).

¹² American Cancer Society. *Cancer Facts and Figures 2017*. <https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2017/cancer-facts-and-figures-2017.pdf>

¹³ Environmental Protection Agency Office of Air and Radiation. Just the facts: Skin cancer in Hawaii. 2014. https://www.epa.gov/sites/production/files/2014-05/documents/sunsafety_fs_hawaii_v18_release_print.pdf

health issue. For further information, please contact Lisa Albany, associate director of state policy for the AADA, at LAlbany@aad.org or (202) 712-2615.

Sincerely,

A handwritten signature in black ink that reads "Henry W. Lim, MD, FAAD". The signature is written in a cursive style.

Henry W. Lim, MD, FAAD
President
American Academy of Dermatology Association

CC: Members of the Committee on Consumer Protection and Commerce



AMERICANS FOR DEMOCRATIC ACTION

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March 29 , 2017

TO: Honorable Chair Takumi and Members of the Consumer Protection & Commerce Committee

RE: SB 1150 SD1 HD2 Relating to Preserving Coral Reefs
Support for hearing on March 30

Americans for Democratic Action is an organization founded in the 1950s by leading supporters of the New Deal and led by Patsy Mink in the 1970s. We are devoted to the promotion of progressive public policies.

We support SB 1150 SD1 HD2 as it would ban the use of sunscreen and other personal care products containing oxybenzone. The health of our coral reefs is of critical importance to the economic, cultural, and environmental wellbeing of our State. Even in minute amounts, oxybenzone has a detrimental impact on coral and other aquatic life, including lowering the temperature at which coral bleaches. There are other ways to protect skin from ultraviolet rays without destroying our reefs. Please vote to protect our marine resources.

Thank you for your consideration.

Sincerely,

John Bickel
President

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 11:23 AM
To: CPCtestimony
Cc: cathyg@animalrightshawaii.org
Subject: *Submitted testimony for SB1150 on Mar 30, 2017 14:00PM*

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Cathy Goeggel	Animal Rights Hawai'i	Support	No

Comments:

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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Chamber of Commerce HAWAII

The Voice of Business

**Testimony to the House Committee on Consumer Protection & Commerce
Thursday, March 30, 2017 at 2:00 P.M.
Conference Room 329, State Capitol**

RE: SENATE BILL 1150 SD2 HD2 RELATING TO PRESERVING CORAL REEFS

Chair Takumi, Vice Chair Ichiyama, and Members of the Committee:

The Chamber of Commerce Hawaii ("The Chamber") **opposes** SB 1150 SD2 HD2, which prohibits use and sale of nonprescription sunscreen, sunblock, or cosmetics containing oxybenzone or other chemicals deemed harmful to coral reefs by the Department of Land and Natural Resources within a marine life conservation district; requires commercial permittees to inform all customers of the prohibition; authorizes Department of Land and Natural Resources to propose rules for other areas to conserve state marine resources.

The Chamber is Hawaii's leading statewide business advocacy organization, representing about 1,600+ businesses. Approximately 80% of our members are small businesses with less than 20 employees. As the "Voice of Business" in Hawaii, the organization works on behalf of members and the entire business community to improve the state's economic climate and to foster positive action on issues of common concern.

We contend that more research needs to be done prior to passing a law banning the use of oxybenzone, a leading ingredient in sunscreen, which has been shown to protect against harmful UVA & UVB radiation. This FDA-approved and dermatologist-recommended ingredient has been used commercially since 1980 to protect against skin damage and skin cancers such as melanoma and squamous skin cell carcinoma.

Although some claim that zinc is better for coral reefs, no concrete evidence exists for this claim. We believe a prohibition on oxybenzone is extremely premature, given that scientists are still monitoring and assessing the effects of climate change on oceans and marine life and most evidence shows that global warming causes coral bleaching. Coral bleaching is occurring in areas with very little human interaction, thus very little sunscreen exposure. The body of evidence on coral bleaching does not support blaming coral bleaching on sunscreen.

We oppose amending this bill to ban the sale of this cancer-preventing product. At a minimum, we should wait for the results of studies conducted in the open ocean before further action is taken. Hawaii is the only state in the U.S. to introduce legislation on oxybenzone. Once more research is conducted in the natural environment we will need more evidence to make an informed decision.

Sunscreen is the first line of defense for those seeking protection from the sun's cancer causing UV rays. Given that oxybenzone is found in an estimated 80 percent of sunscreens,



Chamber of Commerce HAWAII

The Voice of Business

banning its use in Hawaii will drastically reduce the selection of sunscreen products available to residents and visitors. The combination of reduced choice and less effective products could have the dangerous consequence of individuals using less protective sunscreens or worse, no longer using sunscreen, thereby causing more skin damage and potentially increasing skin cancer rates.

A higher level of evidence must be obtained before the legislature bans products that provide a convenient way for individuals to wear sunscreen every day to prevent skin cancer. Oxybenzone is an extremely effective ingredient that rubs in clear and is contained in over 80 percent of consumers' favorite choices of sunscreen.

Thank you for the opportunity to testify.



founded 1881

March 30, 2017

The Honorable Roy M. Takumi
Chair, Committee on Consumer Protection and Commerce
Hawai'i House of Representatives
Hawai'i State Capitol, Room 320
Honolulu, HI 96813

RE: Opposition to S.B. 1150 SD2, HD 2 – Related to oxybenzone in sunscreen

Dear Chairman Takumi,

On behalf of the Consumer Healthcare Products Association (CHPA), a Washington, D.C. based trade association representing the leading manufacturers of over-the-counter medicines and dietary supplements, I'd like to express strong opposition to S.B. 1150 SD2 HD2. This legislation, which seeks to restrict the access of sunscreens containing oxybenzone, will have a profound negative impact on the ability of consumers (tourists and residents alike) to protect themselves against the sun's harmful ultraviolet (UV) rays.

Oxybenzone Background

Oxybenzone is a safe, and effective ingredient approved by the Food and Drug Administration (FDA) in 1978 and found in nearly 2,000 personal care products on the market today, including some of the most popular sunscreens, lip balms, and lotions designed to guard against sun damage. In fact, oxybenzone offers broad spectrum protection against both ultraviolet A (UVA) and ultraviolet B (UVB) rays that often contribute to skin cancer. Some popular sunscreen products containing oxybenzone include Coppertone, ChapStick, Blistex, Hawaiian Tropic Lotion Sunscreen, Aveeno Moisturizing Lotion, SoftLips Cube, Neutrogena lotions and countless other shampoos, conditioners, lipsticks, body washes, hairsprays, aftershaves, and more.

Benefits of Oxybenzone

Oxybenzone allows for affordable high sun protection factor (SPF) protection against damaging sun rays, including those that cause skin cancer. Skin cancer is the most common form of cancer today. Every year there are more cases of skin cancer in the United States than the combined incidents of breast cancer, prostate cancer, lung cancer, and colon cancer combined. In fact, over the last 30 years, more people have experienced skin cancer than all other cancers combined. One out of five Americans will develop skin cancer in their lifetime, and one person dies of melanoma (the deadliest form of skin cancer) every hour. The vast majority of melanomas are caused by the sun, and a person's risk of melanoma doubles if he or she has had more than five sunburns. When used as directed, sunscreens containing oxybenzone on the market today have proven to be very effective in protecting skin against the sun's harmful rays. The FDA has acknowledged research that shows sunscreens aid in decreasing the risk of developing skin cancers and early skin aging. In fact, the FDA recommends use of a broad spectrum sunscreen with SPF values of 15 or higher regularly and as directed to protect against ultraviolet A sun rays as provided by oxybenzone sunscreen products. In order to get ultra-high SPF, oxybenzone is required to serve as a stabilizer for other

sunscreen ingredients in sunscreen. Without it, high SPF may not be achieved. Additionally, oxybenzone allows for wide ranging forms of application including sprays. Zinc oxide sunscreens cannot be manufactured as sprays.

Importance of Self Care and Prevention

For millions of Americans, OTC medicines – like sunscreen containing oxybenzone - are accessible, relied upon, and effective. They allow consumers to self-treat many commonly occurring conditions including the prevention of sunburn. By guarding against sunburns, which can eventually form into harmful skin ailments, OTC medicines allow the healthcare system to focus its limited resources on the diagnosis and treatment of more serious diseases that require physician involvement. They provide consumers the opportunity to care for themselves and their loved ones with safe, effective, and readily accessible treatment options for mild-to-moderate conditions.

According to a study by Booz & Company, every dollar spent by consumers on OTC medicines saves the U.S. healthcare system \$6-\$7, contributing a total of \$102 billion in savings each year. CHPA is committed to empowering consumer self-care by preserving and expanding choice and availability of consumer healthcare products like sunscreen.

Oxybenzone and the Environment

Recent coral bleaching events are of great concern, but coral experts around the world are unanimous in the opinion that global climate change is the major factor affecting coral health.¹ The most recent global coral bleaching event began in 2014, and is directly tied to the fact that the last three years have been the warmest years on record. Climate change is the main causal factor in high water temperatures, high UV exposure, and ocean acidification, all of which affects coral health and drives changes to local reef ecologies. The U.S. National Oceanic and Atmospheric Administration's (NOAA) Coral Reef Conservation Program notes that in addition to global climate change, critical factors include unsustainable fishing practices, coastal development, agricultural run-off, nutrient enrichment, and pollution from industry and sewage.^{2,3} Craig Downs of the Haereticus Environmental Laboratory noted in an interview that "agriculture run-off and sewage are probably responsible for the historical collapse of coral reefs for the past 40 years."⁴

While many of the deleterious effects on coral reefs can be tied to human activity, there is no scientific evidence that under naturally-occurring environmental conditions, sunscreen ingredients are contributing to coral degradation. Terry Hughes, director of the Australian Research Council Centre of Excellence for Coral Reef Studies at James Cook University suggests that extrapolations asserting sunscreen is damaging the world's coral "are a bit of a stretch."⁵ He continues, "the conclusion from the media is sunscreen is killing the world's coral, and that's laughable."⁶ Coral bleaching events are happening all over the world, even in remote reefs with no local human interference.

¹ Mydlarz et. al., 2010; Aeby et al., 2016.

² Fabricius, 2005; Messina and Biggs, 2016.

³ <http://coralreef.noaa.gov/issues/welcome.html>

⁴ No, your sunscreen isn't killing the world's coral reefs. <http://mashable.com/2015/11/10/sunscreen-killing-coralreefs/>.

⁵ Ibid.

⁶ Ibid.

Opportunity Cost

Over-the-counter sunscreen containing oxybenzone are an affordable, accessible first line of defense for individuals seeking protection from the sun's cancer causing UV rays. Banning the use of oxybenzone, an important UV filter ingredient, will drastically reduce the selection of sunscreen products available to Hawai'i's residents and tourists. The combination of reduced choice and less effective products could have the dangerous consequence of individuals using less protective sunscreens or worse – not using sunscreen at all – thereby, causing more skin damage and potentially increasing skin cancer rates.

Conclusion

No state has taken the drastic action of banning the use of oxybenzone beyond what is already mandated by the FDA. Since there have been no studies published to date that scientifically prove any sunscreen active ingredient is a hazard to coral reefs, CHPA respectfully encourages the House Committee on Consumer Protection and Commerce to oppose S.B. 1150 SD2 HD2. A greater standard of evidence must be considered before a product so valuable to people's health is prohibited.

CHPA sincerely appreciates your consideration of our position on this important issue. If you have any questions regarding our position, please contact me directly at your convenience.

Respectfully submitted,



Carlos I. Gutiérrez
Vice President, State and Local Government Affairs
Consumer Healthcare Products Association
202-429-3521 cgutierrez@chpa.org

cc: Members, House Committee Consumer Protection and Commerce

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, March 28, 2017 4:13 PM
To: CPCtestimony
Cc: mkhan@hawaiiantel.net
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/28/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Leimomi Khan	Democratic Party of Hawaii, Hawaiian Affairs Caucu	Support	No

Comments: The Hawaiian Affairs Caucus prefers a complete ban on Oxybenzone, however, we acknowledge the concerns expressed by the Dept of Health and the Dept of Land and Natural Resources regarding the use and ban on oxybenzone. Accordingly, if a ban is not possible, we would support SB1150 with amendment that would require the Dept of Health and the Dept of Land and Natural Resources to develop an effective public education and outreach program to inform Hawaii beachgoers about steps that they can take to reduce the use of oxybenzone while enjoying our beaches in Hawaii as a temporary measure; and that the Dept of Health be requested to conduct a study of the health and environmental impacts of restricting the use of oxybenzone and other sunscreens containing titanium dioxide, zinc oxide or other alternatives to oxybenzone to enable a more informed solution to correct the adverse impact that oxybenzone has on our coral. Respectfully, Leimomi Khan, Chair

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March 29, 2017

TIM VANDEVEER
Chair

MARGARET WILLE
SEAN SMITH
Legislative Affairs Committee Co-Chairs

**SUPPORT FOR SB1150 SD2 HD2
Relating to Preserving Coral Reefs**

Rep. Roy Takumi, Chair
Rep. Linda Ichiyama, Vice Chair
Committee on Consumer Protection and Commerce
Thursday, March 30, 2017 2:00pm State Capitol, Conference Room 329

Submitted on Behalf of the Democratic Party of Hawai'i

The Democratic Party of Hawai'i supports SB 1150 SD2 HD2 "Relating to Preserving Coral Reefs" (Oxybenzone ban) which bans the use and sale of sunscreen or personal care products containing oxybenzone within marine life conservation districts and also provides for rulemaking by the DLNR to issue regulations to protect marine life in other areas. The DPH supports the above legislation based on our Platform and Resolutions and corresponding environmental wellbeing legislative priorities as voted on and passed by the DPH State Central Committee, in support of marine/ocean health. **Although DPH is strongly supporting this Bill, given the widespread degradation of our coral reefs statewide and the known harmful affect of oxybenzone on coral, the DPH is disappointed there is not sufficient support for an outright ban of products containing oxybenzone and related chemicals.** The DPH Environmental Caucus has also made this bill a priority. Please pass this Bill out of your Committee.

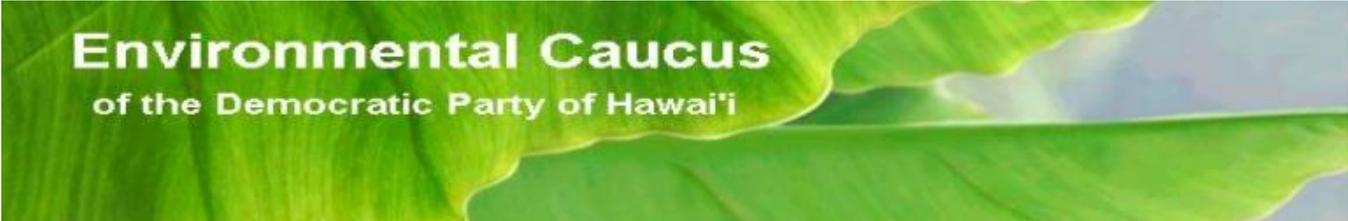
Respectfully submitted,

/s/ *Tim Vandever* (tim@hawaiidemocrats.org)
Chair of the Democratic Party of Hawai'i

/s/ *Margaret Wille* (margaretwille@mac.com)
/s/ *Sean Smith* (simashang@yahoo.com)
Legislative Committee Co-Chairs

DEMOCRATIC PARTY OF HAWAII

PO Box 2041 Honolulu, HI 96805 ☐ (808) 596-2980 ☐ www.hawaiidemocrats.org ☐ info@hawaiidemocrats.org



Environmental Caucus
of the Democratic Party of Hawai'i

March 29, 2017

The Honorable Roy M. Takumi, Chair,
The Honorable Linda Ichiyama, Vice Chair, and Members
House Committee on Consumer Protection and Commerce
Hawaii State Legislature

Re: SB 1150 SD2 HD2, re Preserving Coral Reefs
Hearing: Thursday, March 30, 2017, 2:00 p.m., Conference Room 329
Position: Support with proposed amendments

This bill is the last surviving bill this session that attempts to limit the use of sunscreens containing the endocrine disruptor oxybenzone, a chemical that has toxic effects for the marine environment and possibly for the humans who use it.

It is very disappointing that this bill is among **the weakest and most problematic of the oxybenzone bills** that were introduced at the beginning of this session.

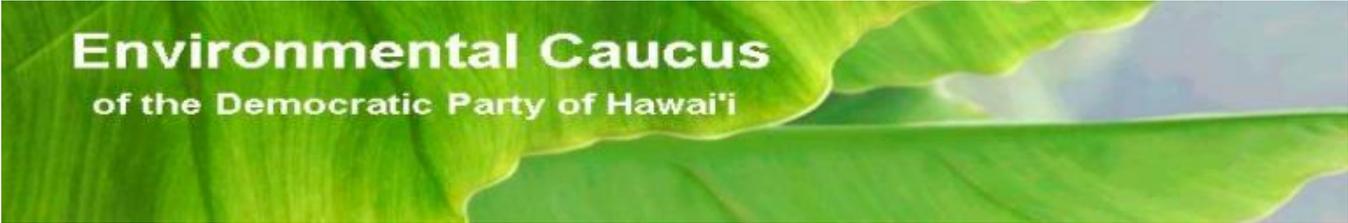
Several of the oxybenzone bills, such as HB 600 and HB 818, would have outright banned the sale of all sunscreens that contain oxybenzone everywhere in Hawaii. This approach remains far preferable for at least three critical reasons:

(1) EASE AND ECONOMY OF ENFORCEMENT – keep oxybenzone products out of the State, and you don't have to send out DLNR or county police to patrol the ABC Stores and hand out tickets to people on the beaches;

(2) AVOID BAD EXPERIENCES FOR TOURISTS – really, a bill that focuses solely on the Marine Life Conservation Districts is going to zero in on Hanauma Bay, Manele-Hulopo'e Bay, Kealakekua Bay, and other tourist spots, and IF the State enforces the ban, it will be doing so in a very unpleasant way, by ticketing tourists; we just don't need that; and

(3) STATEWIDE PROTECTION NEEDED - By applying only to the Marine Life Conservation Districts, this bill protects only a very small part of Hawaii's shorelines, perhaps as little as ONE PERCENT. This leaves perhaps 99% of our inshore coral reefs and fish and invertebrate communities in serious danger from the endocrine damage of oxybenzone.

Please bear in mind that cheap substitutes for oxybenzone exist on the market.



Environmental Caucus of the Democratic Party of Hawai'i

As renowned marine biologists have already testified before this Legislature this session, oxybenzone in the marine environment can have detrimental effects to all marine life, including changes in fish behavior, pathological changes to fish sexual identity, and damage to genomic and DNA integrity. It is known to impact sea urchin development, as well as reduce the viability of sea urchin sperm at concentration that are commonly found in high tourist areas in Hawaii. Furthermore, oxybenzone demonstrates its impacts in embryos and larvae of bivalves (mussels), shrimp, and even important reef algae.

In plain English, oxybenzone kills the reefs.

Most importantly, oxybenzone may suppress restoration of coral reefs by preventing juvenile corals to recruit into an area that is polluted by oxybenzone. This is critical for Hawaii in the faces of disastrous effects of mass bleaching events of last year, and perhaps to continue into the summer of 2017. Oxybenzone can prevent a natural recovery.

For these critical reasons, the Environmental Caucus of the Democratic Party of Hawaii, along with the Democratic Party of Hawaii itself, urge this Committee to pass this bill with an amendment to broaden the prohibition on use of sunscreens containing oxybenzone to all areas Statewide.

Thank you very much for considering our concerns about this very serious and present danger to our coral reefs and other marine life.

Alan B. Burdick
Vice Chair, Environmental Caucus
Burdick808@gmail.com

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 7:37 AM
To: CPCtestimony
Cc: aquaad@hawaii.rr.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Daniel Peavy	Excellence Charters, Inc.	Oppose	No

Comments: We do not oppose educating customers about the use of sunscreens that contain oxybenzone, but that should be the limit of our responsibility. The next section of the bill is the problem and requires DLNR to make rules to prohibit the use of these products. That is wide open and could result in some unreasonable burdens put on commercial permittees. We do protect our reef resources already. It is how we make a living and is a main attraction of visitors to our state. Maybe prohibiting the sale of such products in Hawaii is a better approach, than making operators sunscreen police.

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From: Fritzi <nahcotta2@aol.com>
Sent: Wednesday, March 29, 2017 11:39 AM
To: CPCtestimony
Subject: To Hon. Rep Ray Takumi, Chair CPC,

FEARLESS FUND

www. Fearless Fund .org

Washington DC.

March 29,2017

I am supporting S1150, SD2/HD1 to restrict oxybenzone-product use in Marine Life Protection areas and to BAN the sales of oxybenzone products at concession stores serving Hanauma Bay and other Marine Protected areas. I also encourage the committee to consider banning the SALE of ALL OXYBENZONE products in the State of Hawaii without a medical prescription as being an effective means in reducing oxybenzone pollution. I strongly recommend that the bill be expanded.

Coral reefs are a CRITICAL natural resource for the tourism industry and for local culture and recreation. Their demise in Hawaii is being noticed on the mainland and all over the world. It would be a tragedy to have Hawaii's reef die and not come back.

Please protect our Hawaiian coral reefs. They are important to all of us who don't live in Hawaii

Sincerely,

Fritzi Cohen

CPCtestimony

From: Rene Umberger | For the Fishes <rene@forthefishes.org>
Sent: Wednesday, March 29, 2017 11:07 AM
To: CPCtestimony
Subject: Support SB 1150 SD2, HD2

Aloha Chair Takumi, Vice Chair Ichiyama, and Committee members,

For the Fishes is in strong support of SB 1150, HD2. Because most of Hawaii's reefs have been severely depleted of the beautiful (non *kau kau*) fish that people love to see in nature, both residents and visitors alike flock to where they can be enjoyed: Hawaii's marine life conservation districts. However, these areas represent less than 1% of Hawaii's reefs, and while it is right to protect them first from the harmful effects of sunscreen pollution, we must not sacrifice the remaining 99% of our reefs.

We appreciate that this measure specifies HRS 190, the statutory authority whereby DLNR can take further action, however, DLNR rulemaking often takes years to complete. Climate change, possibly enhanced by local stressors, has already killed many of Hawaii's corals in recent years, and more bleaching events may be just around the corner.

When the legislature drafted and passed HRS 190 regarding rules adopted by DLNR, in recognition of the extreme importance and fragility of Hawaii's coral reefs, it set a very low bar for the prohibition of activities that *may* harm coral reef ecosystems. This included activities that may disturb, degrade, or alter the marine environment.

For a number of reasons, including lack of resources, DLNR has not been able to uphold its mission and duty to protect our natural resources for future generations, and there is no indication that it will be able to do so in the future. We must take action to reduce the stressors that are within our reach. We may not be able to slow global climate change, but we certainly can prevent chemical pollution and restore populations of important fish species, for example.

Today's consumers have many excellent options for sun protection that don't harm our reefs. We, therefore, urge you to pass and strengthen this measure by expanding the areas of coverage beyond the 1% that are within MLCs.

Thank you for the opportunity to submit testimony.

Rene Umberger
Executive Director
808.875.8759 cell: 808.283.7225

For the Fishes
PO Box 1894, Kihei, HI, 96753
FortheFishes.org and on [Facebook](#)



From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 9:43 AM
To: CPCtestimony
Cc: lisa.fohb@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Lisa Bishop	Friends of Hanauma Bay	Support	Yes

Comments: Aloha Chair Takumi and other distinguished members of the House CPC Committee, please pass SB1150 SD2 HD2 which takes reasonable initial steps to restrict the use of reef-toxic sunscreens by: 1) restricting use of sunscreens containing oxybenzone in nature preserves and Marine Life Conservation Districts and their sale at county concessions serving such areas; 2) requiring permittees running tours in such areas to notify customers that oxybenzone sunscreens are prohibited in those areas; and 3) authorizing DLNR to propose rules wherever needed to protect other areas. The science is conclusive that these products are killing our reefs and there are many safe alternative sunscreen products already available on the market. The residents of Hawaii understand and support the need to protect and preserve our reefs. If not now - when? On every they are gone, it will be too late. Mahalo for helping preserve and protect our reefs!

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goddess garden
ORGANICS



Impact on Coral Reefs

By Akshay Gavai

Executive Summary

Goddess Garden, a manufacturer of sunscreen products is looking to create awareness regarding the benefits associated with using its products versus those of other sunscreen manufacturers on coral reefs. By investigating these benefits (or negative effects caused by traditional sunscreen products), Goddess Garden can create a marketing campaign aimed at empowering sunscreen consumers with the information necessary to make the right choices while purchasing sunscreen products. This will ultimately help consumers understand the importance of coral reefs to the earth's environment, the negative impacts on coral reef by traditional sunscreen products, and why purchasing a Goddess Garden product over a traditional sunscreen one helps preserve these delicate eco-systems. The following research provides Goddess Garden with all the information necessary to educate consumers of the impact on coral reefs by sunscreen products for its overall marketing efforts.

Company Profile

Goddess Garden is a producer of organic sunscreen products. Its headquarters and manufacturing unit are based in Longmont, Colorado. It was founded in 2004 by Nova Covington in response to her daughter having allergic reactions to traditional skin care products. The company produces a variety of organic sunscreen products for all age groups which have been categorized as follows:

- Baby – Sunscreen primarily for babies/toddlers
- Kids – Sunscreen primarily for children
- Facial – Sunscreen for the face for adults
- Everyday – Sunscreen for everyday use for adults
- Sport – Unscented sunscreen for adults
- Kids Sport – Unscented sunscreen for children
- Lip Balms – Sunscreen for lips
- Sun Repair System – A daily skincare routine for adults to repair and prevent premature aging

Objective of Research

Goddess Garden is one of the few producers of organic sunscreen in the sunscreen market. Its products have typically been marketed by focusing on the human health benefits of using organic sunscreen. This is obvious because Covington started the company in response to her daughter having allergic reactions on her skin to traditional non-organic sunscreen. In addition, there have been studies linking chemicals such as Oxybenzone, which is used in traditional sunscreen, to hormone disruption in humans.

However, along with the negative effects of traditional sunscreen on humans, recent research also links its usage with damage to the environment, specifically coral reefs. Unlike traditional sunscreen, Goddess Garden's sunscreen products do not damage coral reefs and can be termed as

“reef-safe” sunscreens. Hence, Covington would like to quantify the benefits to the coral reefs as a result of a consumer using a Goddess Garden product vs. a traditional sunscreen product. This information will then be used in its marketing campaigns to educate existing and potential customers of the benefits to coral reefs of using Goddess Garden’s products versus traditional sunscreen. Hence, the overall objectives are to:

- ❖ Educate consumers regarding the importance of coral reefs
- ❖ Educate consumers regarding the negative impacts of traditional sunscreens on coral reefs
- ❖ Convince consumers to switch to Goddess Garden products from other sunscreen manufacturers with an effort to save coral reefs.

This research is outlined below:

Key Research on Sunscreen and Impact on Coral Reefs

Corals

Corals are small colorful soft-bodied organisms that live in clear, shallow, warm waters. At their base is a hard, protective limestone (calcium carbonate) skeleton called a calicle, which forms the structure of a coral reef. They are often mistaken for plants since they look like them, but are in fact animals since they do not prepare their own food. Corals get their color from zooxanthellae, the algae which they host. They have a symbiotic relationship with this algae since they both depend on each other for survival.

Zooxanthellae

Zooxanthellae are an algae that live inside corals. They perform photosynthesis and share the resulting food with corals, their hosts. The zooxanthellae are also responsible for the beautiful colors that corals contain.



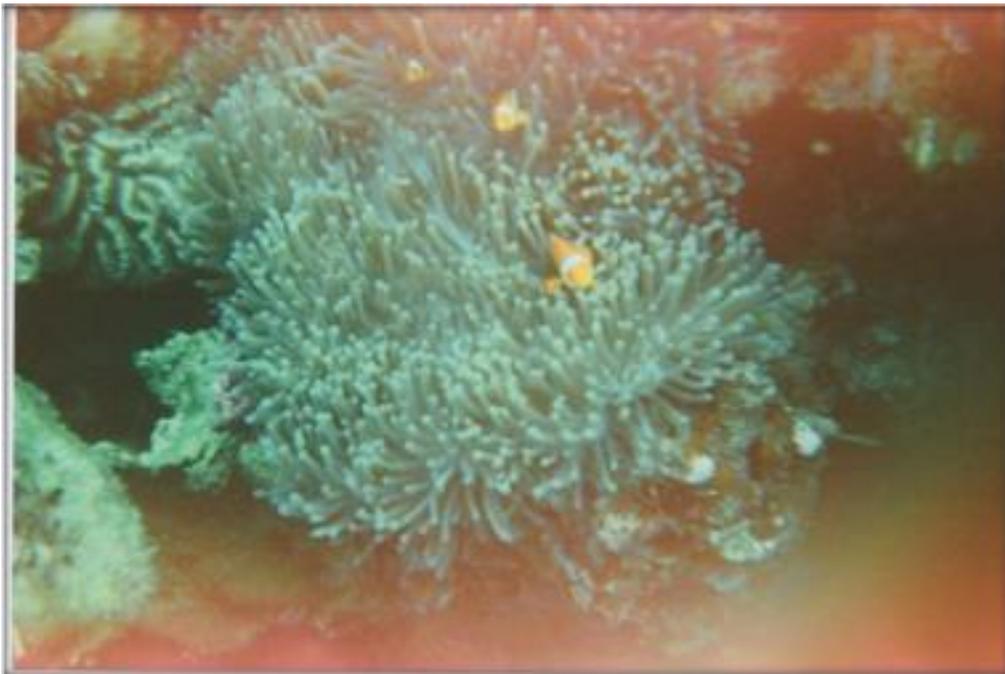
Image showing coral and the algae zooxanthellae. The zooxanthellae are the small brownish-green spots on the coral.

Coral Reefs

A coral reef consists of underwater structures made from calcium carbonate (limestone) secreted by corals. A reef is host to various marine life such as sea slugs, oysters, clams, crabs, shrimp, sea worms, star fish, sea urchins, jelly fish, various types of fungi, sea turtles, and many species of fish.



Coral reef in the Great Barrier Reef of Australia



Photograph taken by myself of a coral reef in Krabi, Thailand in April 2012

The Importance of Coral Reefs

- ❖ Coral reefs are one of the most diverse eco-systems in the world
 - Hence, they are often called the rainforests of the sea
- ❖ Coral reefs support more species per unit area than any other marine environment.
 - This includes about 4,000 species of fish, 800 species of hard corals and hundreds of other species.
 - Hence, they feed about 30 to 40 million people every year
- ❖ They provide a natural barrier between the ocean and the shore
 - By protecting the coasts from strong currents and waves by slowing down the water

Current Impacts on Coral Reefs

When corals die, they lose their vibrant colors and turn white. This is known as *coral bleaching*. Coral bleaching can occur for a variety of reasons. The known anthropogenic (human induced) cause of coral bleaching are as follows:

- ❖ Pollution in oceans
 - Chemical run-off from agricultural practices
- ❖ Fishing practices
 - Certain destructive fishing methods that use cyanide or dynamite
- ❖ Ocean acidification from an increase in greenhouse gas emissions
 - Increase in CO₂ in oceans absorbed from the atmosphere increases acidity of ocean water
- ❖ Temperature increase – Global warming
 - Ocean temperature increases due to global warming
- ❖ Sunscreen
 - Release of chemicals from sunscreen products

It is estimated that:

- 10% of all coral reefs are degraded beyond recovery
- 30% are in critical condition and may die within the next 10 to 20 years
- 60% of world's coral reefs may die completely by 2050 if we continue with 'business as usual'.



Image depicting coral bleaching. The coral on the left is a perfectly healthy one whereas the one on the right is bleached.

Sunscreen's Impact on Coral Reefs

In January 2008, Professor Robert Danovaro and a group of researchers at the Polytechnic University of Marche in Italy, published groundbreaking research regarding the impact of sunscreen on coral reefs. This research was published in the peer-reviewed journal, *Environmental Health Perspectives*. The following are the key findings from their research:

Chemicals in Sunscreen Responsible for Coral Reef Bleaching

There are more than 20 chemical compounds that are used in sunscreen products. Danovaro and his team tested 7 of the most common chemicals found in sunscreen products which are used as either active or inactive ingredients. Out of these 7, they found that 4 chemicals are primarily responsible for the complete bleaching of corals. The 4 chemicals (henceforth termed as the 'dirty four') are as follows:

- ❖ Benzophenone-3 (Oxybenzone) - BZ
 - Provides protection against UVA and UVB rays.
- ❖ Ethylhexylmethoxycinnamate (Octyl Methoxycinnamate) – OMC, OCT
 - Its primary use is in sunscreens and other cosmetics to absorb UV-B rays from the sun, protecting the skin from damage.
- ❖ 4-Methylbenzylidene Camphor - MBC
 - An organic camphor derivative that is used for its ability to protect the skin against UV, specifically UV B radiation.
- ❖ Butylparaben
 - It is used as an antimicrobial preservative in cosmetics such as eye shadow, foundation, sunscreen, facial moisturizer and skin anti-aging treatment.

How do the Dirty Four Kill Coral Reefs?

Corals contain an algae known as zooxanthellae. The zooxanthellae and coral are dependent on each other for survival. Zooxanthellae have latent viruses which multiply when exposed to the dirty four. The viruses eventually kill the zooxanthellae which leaves the coral with no food source. The coral, without its symbiotic partner, loses its color (coral bleaching) and eventually dies (as shown in photo above).

Loss of the corals causes all the other species dependent on the corals to lose their home and their food source. This causes a widespread destruction of coral reefs. The following video features Professor Robert Danovaro explaining how sunscreens impact the coral reefs

<https://www.youtube.com/watch?v=sDia05xVy9U&noredirect=1>

Data Related to Sunscreen Usage

- ❖ Between 16,000 to 25,000 tons of sunscreen are used globally by consumers in reef areas.
 - 25% of the amount applied is washed off into oceans as a result of swimming and bathing.
 - This results in 4,000 to 6,000 tons of sunscreen being released in reef areas.
 - Hence, it is estimated that 10% of the world's coral reefs are at risk of bleaching due to sunscreen use. The Great Barrier Reef, the largest coral reef system in the world, covers an area of 133,000 square miles. This equates to 13,300 square miles of the reef disappearing.

Personal Note

I applaud Goddess Garden for engaging in this project and would like to thank Nova Covington and the entire team for giving me the opportunity to work with them. It has been a great learning experience for myself and has further encouraged me to explore ways to help conserve the coral reefs at a more personal level. It is wonderful and refreshing to see a corporation engage in such efforts and I hope to see Goddess Garden succeed in this endeavor.

One of the most memorable experiences I have had in my life was swimming alongside a turtle in the coastal waters of Green Island in the Great Barrier Reef of Australia in December of 2008. I was so overjoyed when I saw the turtle and had the chance to swim near it. This experience always reminds me how beautiful the coral reefs are, tucked away under the sea, most of the time hidden from the view of humans. We must never forget that even though we don't always see the beauty of nature, we are bound to it and our actions impact it in every way.



Photo of the turtle underwater

Photo of myself following the turtle

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 - <http://en.wikipedia.org/>
 - <http://floridakeys.noaa.gov/corals/coralanimals.html>

17. Global warming and coral reefs.
http://news.nationalgeographic.com/news/2006/05/warming-coral_2.html

18. Other natural sunscreen products. <http://www.padi.com/blog/2013/06/27/coral-reef-safe-sunscreen-for-scuba-diving/>

Other Useful Information

1. Titanium Dioxide toxicity. <http://www.foe.org/news/archives/2013-03-05-tests-reveal-potentially-toxic-titanium-dioxide-in-sunscreens-cosmetics>

2. Toxicology effects of UV filter benzophenone -2.
<http://link.springer.com/article/10.1007/s10646-013-1161-y>

3. Sunscreen ingredients linked to endometriosis.
<http://www.webmd.com/women/endometriosis/news/20120511/sunscreen-ingredient-linked-endometriosis>

To Honorable Representative Roy Takumi, Chair, CPC.
 Testimony in SUPPORT SB1150, SD2, HD2
 Hearing Date 3-30-17; Conference Room 329; 2PM

From Sylvia Litchfield
 Co-Chair, Green Party of Maui

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 415 Dairy Rd.
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Or Petition, in SUPPORT of SB1150, SD2, HD2

CORAL REEFS vs SUNSCREEN: A chemical called oxybenzone which is found in sunscreen and other personal care products is decimating coral reefs, making coral more susceptible to bleaching. More than 50 percent of coral off the West Hawaii coastline has bleached and possibly died this summer. Any small effort to reduce oxybenzone pollution could mean that a coral reef survives a long, hot summer, or that a degraded area recovers. While there are a lot of things we can't do anything about, this is one thing we can do right now for the environment.

To see our online petition with additional signatures and comments: <https://www.change.org/p/hawaii-state-legislators-take-action-to-protect-hawaii-s-dying-coral-reefs-ban-toxic-chemicals-in-sunscreen>

Name	City	State	Postal Code	Country	Signed On
Sylvia Litchfield 1/24/17	Kahului	Hawaii		United States	
garvin yuana 1/26/17	MAKAWAO	Hawaii	96768	United States	
Karen K. Cobeen 1/26/17	Kamuela	Hawaii	96743	United States	
Bill Quam 1/26/17	Honolulu	Hawaii	96822	United States	
Stacy Porteus 1/26/17	Kailua-Kona	Hawaii	96740	United States	
Valerie Wickert 1/26/17	Honolulu	Hawaii	96822	United States	
Leslie Geffen 1/26/17	Golden	Colorado	80401	United States	
eric feingold Jacqueline Farrell	Haiku	Hawaii	96708	United States	1/26/17 1/26/17
Eric Dilley 1/26/17	Ventura	California	93003	United States	
Erik Brush 1/26/17	Auburn	Alabama	36830	United States	
Esti Winter Mirella von Lindenfels 1/26/17	Rehovot Hurstpierpoint			Israel bn6 9ql	1/26/17 United Kingdom
TAPITA KAWAILANI 1/26/17	Newhall	California	91321	United States	
Kendall Johnson 1/26/17	Corpus Christi		Texas	78412	United States
Tasja Ebersole	Søborg		2860	Denmark	1/26/17

Lotte Handgaard Joergensen		Copenhagen			
Denmark 1/26/17					
Catrina Nesper		Kailua	Hawaii	96734	United States
1/26/17					
Linda Cherry		Spartanburg	South Carolina	29306	United States
1/26/17					
Jacob Peacock		Des Moines	Iowa	50317	United States
1/26/17					
Vija Sehgal		Kailua	Hawaii	96734	United States
1/26/17					
Elisa Favale	Trofarello		10028	Italy	1/26/17
Christina Comfort		Honolulu	Hawaii	96822	United States
1/26/17					
teressa beard		makawao	Hawaii	96768	United States
1/27/17					
Michael Smola		Kaaawa	Hawaii	96730	United States
1/27/17					
cathy knowlton		Haiku	Hawaii	96708	United States
1/27/17					
Erika Arnett					1/27/17
Ikue Ebersole		Valby			Denmark 1/27/17
Bayleaf Garden		Nottingham		NG5 3ES	United Kingdom
1/27/17					
Matthew Bredeson		Lahaina	Hawaii	96761	United States
1/28/17					
Alana Beckel		Kihei	Hawaii	96753	United States
1/28/17					
Lehua Kalawa'a		Kaneohe	Hawaii	96744	United States
1/29/17					
Kathy Marquez		Colorado Springs		Colorado	80909 United States
1/29/17					
Alex Beers		Wailuku	Hawaii	96793	United States
1/29/17					
Madison Wrobel					1/30/17
Darrian Alexis Raynor					1/30/17
Breanna Burns					1/31/17
Stanley Gurley					2/1/17
Jon Keto					2/1/17
Colton Avery		Auburn	California	95603	United States
2/2/17					
Yasmin Myers		Kapolei	Hawaii	96707	United States
2/2/17					
Sharon Willeford		keauhou	Hawaii	96739	United States
2/2/17					
kristen hunter		makawao	Hawaii	96768	United States
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Noelle Cullins		Haiku	Hawaii	96708	United States
2/2/17					
Poppy Hudson		Lahaina	Hawaii	96761	United States
2/2/17					
Mandy conger		Castle Rock	Colorado	80109	United States
2/2/17					
Timothy Smith		Oakland	California	94606	United States
2/2/17					
Dianne Blomquist		Princeville	Hawaii	96722	United States
2/2/17					
Priscilla Rodriguez		valencia	California	91354	United States
2/2/17					
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2/2/17					

Dennis B Miller 2/2/17	honolulu	Hawaii	96815	United States
Gama Leong 2/2/17	Petaling Jaya		11060	Malaysia
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Rolf Mense 2/2/17	Puerto Lumbreras		30891	Spain
Silvia Steinbrecher			53881	Germany 2/2/17
Susana Muñoz	Madrid		28019	Spain 2/2/17
bos claudine	poligny		39800	France 2/2/17
Tineke Heutinck	Arnhem		6843	Netherlands 2/2/17
Helena Trojak	Kielce			Poland 2/2/17
Violetta Hartmann			15936	Germany 2/2/17
Andrea Knöpfler			30625	Germany 2/2/17
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Karina Utech			13349	Germany 2/2/17
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christa lohrig			41352	Germany 2/2/17
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Rita Stämpfli	Kirchdorf		3116	Switzerland 2/2/17
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lyle stevens 2/2/17		Raleigh	North Carolina	27609	United States
Suzan Toma	Sittard		6137 PV	Netherlands	2/2/17
Dejan Gorcic		Nis			Serbia 2/2/17
Sandra wight		durban			South Africa 2/2/17
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Petra Hegenscheidt		Essen		45131	Germany 2/2/17
Beeke Engel		Kiel		24106	Germany 2/2/17
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Chardonnens Sonja		Mannens		1564	Switzerland 2/2/17
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rosa blanckaerts		antwerpen		2040	Belgium 2/2/17
Frederic Nelcha		Saint-Prex			Switzerland 2/2/17
Anke O. Schaller				36433	Germany 2/2/17
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Bobbi Parsley 2/2/17		Atwood	Illinois	61913	United States
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Niina Bejling	Stockholm			Sweden	2/2/17
Ronny De Coster		Ghent		9000	Belgium 2/2/17
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MG Thiam			7820	Spain	2/2/17
Tiffany Torre	Honolulu	Hawaii	96816	United States	2/2/17

Maureen Belger 2/2/17	Hopkinton	Massachusetts	1748	United States
Julien Eberle			5500	France 2/2/17
kelly white	Kingston		K7K4N7	Canada 2/2/17
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Tineke Heutinck			1607	Netherlands 2/2/17
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Renchen N-e	Hamburg		22089	Germany 2/2/17
Nicolette Ludolphi	Bremen		28239	Germany 2/2/17
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Margaret Martin-Wood	Victoria		V9C3Y7	Canada 2/2/17
Rudolf Mühl	Michelstadt		64720	Germany 2/2/17
pat hermans	Venlo	5915gp	Netherlands	2/2/17
Makishita Ayako			620931	Japan 2/2/17
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Austin Fryar 2/2/17	Pahoa	Hawaii	89072	United States
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Barrie Hurst-Dreyer 2/2/17	Marietta	Georgia	30066	United States
Andreas Thiel	Munich		81545	Germany 2/2/17
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H Mol 2/2/17	Poortvliet	Nebraska	4693EG	United States
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Nichole Davis 2/2/17	Koloa	Hawaii	96756	United States
Jhyomo Tmg	L			Cyprus 2/2/17
Kathy Vorderbruggen 2/2/17	overland park		Kansas	66204 United States
lucy (its time to wake up) sn2 7tp	keith (because Animals are Living the Nightmare)	United Kingdom		Swindon 2/2/17
Pauline Scott 2/2/17	London	California	SW17OQQ	United States
susan devereaux 2/2/17	new castle	Delaware	19720	United States
Angela Fricke			37441	Germany 2/2/17
Claudia Wallies-Klose	Uetze		31311	Germany 2/2/17
josline gallagher	malta			Malta 2/2/17
Carole Korth	Hughenden		Tob2eo	Canada 2/2/17
lynn goodwin 2/2/17	lower sackville			B4C 1L1 Canada
tina michelakis	Hasselt			Belgium 2/2/17
Goran Jović	Izola			Slovenia 2/2/17

Esther Kemperle		Berg			Austria	2/2/17
Lisa Miller		Portsmouth		po64pn	United Kingdom	
2/2/17						
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Elisabeth Bechmann		St. Pölten		3100	Austria	2/2/17
Sigrid Dr. Neef		37688 Beverungen			Buddha	Germany
2/2/17						
Ellen Gurtner		Mönchengladbach			41189	Germany
2/2/17						
Eva-Maria Haak		Salzgitter		67346	Germany	2/2/17
brigitte hoin		Aachen		52134	Germany	2/2/17
maren exel		basel			Switzerland	2/2/17
Rita Cauchi		Melbourne		3068	Australia	2/2/17
mary peteinaraki		heraklion city creta			71305	Greece
2/2/17						
Oliver Jordi		Kirchlindach/Bern			3038	Switzerland
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Silja Alter		Weßling		82234	Germany	2/2/17
Yan Ei Ra		Singapore			Singapore	2/2/17
Marion Schiffers		Brussels		4720	Belgium	2/2/17
Infinity Infinity		cholet		49300	France	2/2/17
Iveta Kubovicova		Povazska Bystrica			1701	Slovakia
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Lill Sunde		Bergen		5350	Norway	2/2/17
Laila Sunde	Odda	Nevada	5750		United States	2/2/17
Fernande Fournier		Luxembourg			Luxembourg	2/2/17
Lydia Zink		Hanover		30627	Germany	2/2/17
Sonia SONY				54470	Germany	2/2/17
Terri Gits		Conifer	Colorado	80433	United States	
2/2/17						
Peter Scott		Millcreek	Utah	84106	United States	
2/2/17						
Susanne Wischinski				26316 Varel	Germany	2/2/17
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2/3/17						
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2/3/17						
Sofia Kalliolia		Corfu		14223	Greece	2/3/17
kathy stoddard		napanee		kr3l2	Canada	2/3/17
Gerlinde Holzer		Guntersdorf		2042	Austria	2/3/17
Susannah Gelbart		Las Vegas	Nevada	89149	United States	
2/3/17						
Gisela Gama				47002	Portugal	2/3/17
Alexis Azcárate				62767	Mexico	2/3/17
Gabriela Baldaia		Porto		42003	Portugal	2/3/17
Maria Guedes				43002	Portugal	2/3/17
Tereza Cristina Marins		São Paulo		3589	Brazil	2/3/17
Janine Vinton		Hastings		3915	Australia	2/3/17
Suzanne O'Meara		Keaau	Hawaii	96749	United States	
2/3/17						
Kate Danum	Copenhagen				Denmark	2/3/17
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2/3/17						
Petra Jones	Sydney		2204	Australia	2/3/17	
Ray Uriarte		Murrieta	California	92536	United States	
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	Davinia Hernández Gómez					38730	Spain
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2/3/17	martine cuisenaire		Heer		5543	Belgium	2/3/17
	chris usami		toronto		m9w2v9	Canada	2/3/17
	Irmchen Wagner				72474	Germany	2/3/17
	Randy Prescott		Ferndale	Washington	98248		United States
2/3/17	Dennis Dougherty		San Rafael	California	94903		United States
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	joyce alexander		edinburgh		eh15 1le		United Kingdom
2/3/17	BONDONI Véronique		sigean	Florida	arretez le		United States
2/3/17	Magda Komorowska		Mississauga		L5E3N5	Canada	2/3/17
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2/3/17	Diane Dickinson		Neptune City		New Jersey 7753		United States
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	Eve Maquin			77330		France	2/3/17
	castellani isabelle		livry gargan		93190	France	2/3/17
	Claudine MAMMERI		LAUDUN		30290	France	2/3/17
	Marina Kotelnikova		Moscow		121359		Russian Federation
2/3/17	nathalie dubuy		Sannois		95110	France	2/3/17
	Virginie Mondon		Saint-Quentin		2100		France
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	donna wade	Calais	Maine	4619		United States	2/3/17
	Jacqueline Cohn		Myrtle Beach			South Carolina	29579
	United States	2/3/17					
	suzanne Peters		Kapaa	Hawaii	96746		United States
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	isabelle obscur		toulon		83000	France	2/3/17
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2/3/17	Celeste Costa		Old Westbury		New York 11501		United States
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	Petra Jakubzik		Grevenbroich		41515		Germany
2/3/17	wendy leys		antwerpen		2223	Belgium	2/3/17
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Mary Milham 2/4/17	Waianae Hawaii	96792	United States
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Mariana Lukáčová 2/4/17	Moldava nad Bodvou		Slovakia
susan siegel	kealakekua Hawaii	96750	United States 2/4/17
Marie Mary		91390	France 2/4/17
Mihai Beagu	Bucuresti		Romania 2/4/17

Jasmine Cerfontaine		Sambreville			Belgium	2/4/17
Elizabeth Bishop		Honolulu	Hawaii	96825	United States	
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NOITON Willy		Ceyzériat		1250	France	2/4/17
Valerie Curtis		Orono	Maine	4473	United States	
2/4/17						
maria isabel			48080	Spain		2/4/17
Nadia KUGELOV		St Brieuc		22000	France	2/4/17
Stephanie Strong		Kihei	Hawaii	96753	United States	
2/4/17						
Andy Benik		North Hollywood		California	91601	United States
2/4/17						
Sylvia Gries		Eppenbrunn		66957	Germany	2/4/17
marielaure vignaud				16200	France	2/4/17
Kathy Efthymiakopoulos		Longueuil		j4k5g7	Canada	2/4/17
Chantal Blot	Ygos-Saint-Saturnin			40110	France	2/4/17
wendy smith	nelson		bb98tt		United Kingdom	2/4/17
Floriane M			78000	France		2/4/17
Jeffrey Zollman		Saint Paul	Minnesota	55113	United States	
2/4/17						
Roderick Hall		Temecula	California	92591	United States	
2/4/17						
Jeannine Johnson		Honolulu	Hawaii	96821	United States	
2/4/17						
Anna Luneau		liège			Belgium	2/4/17
Maria Tüchler		8082 Kirchbach			Austria	
2/4/17						
cristina fernandez		Tandil		7000	Argentina	2/4/17
Rebecca Hall		Cambs	South Carolina		PE16 6NN	United States
2/4/17						
Vanessa Love		Caldwell	Idaho	83607	United States	
2/4/17						
Zhu Zhu Xiao		Seattle	Washington	98105	United States	
2/4/17						
Karin Guenther				27474	Germany	2/4/17
peter christiansen		odense nqww			Denmark	
2/4/17						
Corryn Gow	I			South Africa		2/4/17
Jayne Riley		Lincoln		LN50SF	United Kingdom	
2/4/17						
Jordan Felt		Hilo	Hawaii	96720	United States	
2/5/17						
dana jenkins						2/5/17
Hannah Dresang		Fort Collins	Colorado	80526	United States	
2/5/17						
Danny Chan	LaSalle		H8N 2T6	Canada		2/5/17
Maureen Bacon		Kihei	Hawaii	96753	United States	
2/5/17						
Jo Murphy		Corvallis	Oregon	97330	United States	
2/5/17						
john ambrose		calgary		t1y 5z5	Canada	2/5/17
Staniclav Aksyonov		Тюмень			Russian Federation	
2/5/17						
Elisa Leflore	El Dorado	Arkansas	71730	United States		2/5/17
adele urbanek		M?dling			Austria	2/5/17
jean hodges	Farmington Hills	Michigan		48335	United States	
2/5/17						
John Guthrie		"Bristol,"		BS37 4DH.	United Kingdom	
2/5/17						
ANNA STICCA		Brescia		46043	Italy	2/5/17

Gero Wölfel 2/5/17		Ichtershausen		99334	Germany
Karrie Kalich 2/5/17		Keene	New Hampshire	3431	United States
Anselmo Escobedo 2/5/17		Colton	California 92324		United States
Dagmar Grabsch		Berlin		13627	Germany 2/5/17
Jessica Taylor					2/5/17
Rachel Kattlove 2/5/17		Hanalei	Hawaii Hanalei		United States
Sabine Mayr		Innsbruck		6020	Austria 2/5/17
Danuta Watola		Kalety		42-660	Poland 2/5/17
Ulrica Sjögren		Sweden			Sweden 2/5/17
Raphiell Nolin 2/5/17		Puunene	Hawaii	96784	United States
N. Marciel 2/6/17		Campbell	California	95008	United States
Mary O'Neill 2/6/17		Cambria	California	93428	United States
Paul Carter 2/6/17		Paia	Hawaii	96779	United States
judielyn Iloren		bislig			Philippines 2/6/17
Natalie Van Leekwijck		Deurne		2100	Belgium 2/6/17
jasper sierra	Laytonville	California	95454	United States	2/6/17
Evelyn Ampolos 2/6/17		Kahului	Hawaii	96732	United States
Madeleine Gläser				92536	Germany 2/6/17
Maria Schulz		Timisoara		300424	Romania 2/6/17
Tulsi Greenlee 2/7/17		Haiku	Hawaii	96708	United States
Paul Ross 2/7/17		San Antonio	Texas	78247	United States
Douglas Sheehan 2/7/17		San Carlos	California	94070	United States
CHRISTINE LEDDON 2/8/17		Wichita	Kansas	67217	United States
Catherine Clemmens 2/9/17		Dayton	Ohio	45419	United States
James Flanagan 2/9/17		Greenville	Rhode Island	2828	United States
Andrew Frost					2/9/17
Jakub Coltun					2/11/17
Radhika Rishi 2/12/17		Silver Spring	Maryland	20902	United States
Deb Lill 2/13/17		Appleton	Wisconsin	54911	United States
desanka sandulovic		belgrade		11000	Serbia 2/13/17
pino m.		bgd		11000	Serbia 2/13/17
Marco Baracca		Milano		20142	Italy 2/17/17
Elle Lang 2/18/17		St. Louis	Missouri	63119	United States
Dan Hassler					2/19/17
Lisa Salazar	Shasta Lake	California	96089	United States	2/19/17
NIKHILANANDA n 2/20/17		"MAKAWAO MAUI,"	Hawaii	96768-1704	United States
Joseph Kohn MD 2/20/17		Wailuku	Hawaii	97693-9762	United States
Fred Boyd 2/20/17		Scottsdale	Arizona	85257	United States

LJ Bates III 2/24/17	Mountain View	Hawaii	96771	United States
Barryn Chun 2/25/17	Kaneohe	Hawaii	96744	United States
Glorianne Garza 2/25/17	Volcano	Hawaii	96785	United States
Edgar Espero 2/25/17	Ewa Beach	Hawaii	96706	United States
Kyle Pritchard 2/25/17	Denver	Colorado	80219	United States
Patricia Blair 2/25/17	Hawaii	Alabama	96734	United States
ryan christopher 2/25/17	scottsdale	Arizona	85260	United States
Shannon Rudolph 2/25/17	Holualoa	Hawaii	96725	United States
Myra Nickla 2/25/17	Little Rock	Arkansas	72207	United States
LeRoy Hatton 2/26/17	Missoula	Montana	59802	United States
REAH High 2/26/17	Shingle springs	California	95682	United States
Sue Corey 2/26/17	Chico	California	95926	United States
Diane Koerner 2/26/17	Pahoa	Hawaii	96778	United States
Amanda Hennessy 2/26/17	Crescent City	California	95531	United States
Corinne Peace 2/26/17	haiku	Hawaii	96708	United States
Divona Leitner Maggie Belsan 2/26/17	Vancouver fairfax	Virginia	V5X 4N5 22030	Canada United States
Ananda Stone 2/26/17	Lahaina	Hawaii	96761	United States
christian laney-clark 2/26/17	oroville	California	95966	United States
Sarah Teehee 2/27/17	Kailua-Kona	Hawaii	96740	United States
Harry Prince Carri Stearns 2/28/17	Lahaina	Hawaii	96761 96768	United States United States
Teri Heede 2/28/17	Kapolei	Hawaii	96707	United States
Nedi McKnight 2/28/17	Paauilo	Hawaii	96776	United States
Renee Miller 3/1/17	Makawao	Hawaii	96768	United States
Alice Axe 3/1/17	Toms River	New Jersey	8753	United States
Mary Overbay 3/2/17	Puunene	Hawaii	96784	United States
Pamela Waiolena 3/3/17	Waikoloa	Hawaii	96738	United States
Stephen Newman 3/6/17	Haleiwa	Hawaii	96712	United States
Omar Scott Antar 3/6/17	Moosup	Connecticut	6354	United States
robyn couturier 3/6/17	swansea	Massachusetts	2777	United States

Patricia Nardone 3/6/17	Union	New Jersey 7083	United States
Chris Scholl 3/6/17	Neptune	New Jersey 7753	United States
kathy smith 3/6/17	Trumann	Arkansas 72472	United States
Asawari Ghude 3/6/17	Short hills	New Jersey 7078	United States
Guloim Zhapbarbergenova United States 3/6/17		Bloomfield Hills	Michigan 48302
Ilean Brown	Elliot Lake	P5A 1S2	Canada 3/6/17
Teressa Tremaglio 3/6/17	Boynton Beach	Florida	33435 United States
steve phenicie 3/6/17	silvercliff	Wisconsin 54104	United States
Emanuel Falcone 3/7/17	Fort Myers	Florida 33908	United States
Maura Ivan	Hamilton	L0R1C0	Canada 3/7/17
Cathy Thomas 3/8/17	Richmond	Virginia 23225	United States
Mary Finelli 3/8/17	Silver Spring	Maryland 20904	United States
Caroline Struck	Osnabrück	49086	Germany 3/9/17
elizabeth rose 3/9/17	zanesville	Ohio 43701	United States
Julie Martin 3/9/17	Frederic	Wisconsin 54837-8918	United States
Kelleen Knight 3/10/17	Summerland	California 93067	United States
Eliette Bozzola	Muël	35290	France 3/10/17
sarah compratt 3/10/17	champaign	Illinois 61820	United States
Maryam Kamali 3/10/17	Belmont	California 94002	United States
Sophie Marcella	Victoria	V8V4L4	Canada 3/10/17
Mark Lazeration 3/10/17	Grand Island	New York 14072	United States
Louie Adams 3/10/17	London	N8 8hu	United Kingdom
HM vd Steen	Leiden	2312ZM	Netherlands 3/10/17
Kristina Sedic	Zagreb	10000	Croatia 3/10/17
Jeannine Kühn		50127	Germany 3/10/17
angela eyre 3/10/17	Manchester	M19 2QS	United Kingdom
Astrid McLean	Calgary	T3H 0A2	Canada 3/11/17
Daniela Oliveira 3/11/17	Quilmes- Buenos Aires	1871	Argentina
Karen McCombs 3/11/17	Garner	North Carolina 27529	United States
CHARMAINE HAMANN 3/19/17	GAITHERSBURG	Maryland 20878	United States
Stephanie Tolla 3/19/17	san francisco	California 94109	United States
Suzanne Post 3/19/17	Franklin	North Carolina 28734	United States
Erica Kolhoff 3/19/17	Garrettsville Ohio	44231	United States
RedElisa Mendoza 3/19/17	No. Miami	Florida 33161	United States
Jennifer Fogarty	Campbell Hall	New York 10916	United States

3/19/17						
Lois Hamilton		Schertz	Texas	78154	United States	
3/19/17						
a j french		Corning	New York	14830	United States	
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Meira Geysler		Passaic	New Jersey	7055	United States	
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Amanda Fletcher		Kihei	Hawaii	96753	United States	
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Sarah Brandenstein		Makawao	Hawaii	96768	United States	
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Anne van de merghel		Fountain Valley	California	92708	United States	
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Bruce Jacobs		Makawao	Hawaii	96768	United States	
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Deek Martin		Haiku	Hawaii	96708	United States	
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erin lynch		Marlton	New Jersey	8053	United States	
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Scorr Widdifield		Pahoa	Hawaii	96778	United States	
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Kristen Harmon		Honolulu	Hawaii	96826	United States	
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Virginia Branco		Hilo	Hawaii	96720	United States	
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Keenan Cheney		Waianae	Hawaii	96792	United States	
3/20/17						
Amy Pennington		Hilo	Hawaii	96720	United States	
3/20/17						
Sarah Butler	Kalamazoo	Michigan	49008	United States		3/20/17
Larry Coltrane		Honolulu	Hawaii	96822	United States	
3/20/17						
Julie Lowery	Kihei	Hawaii	96753	United States		3/20/17
Kristin Palmeri		Pāhoā	Hawaii	96778	United States	
3/20/17						
Anthony LaBua-Keiser		Haiku	Hawaii	96708	United States	
3/20/17						
Randy Bartlett		Honolulu	Hawaii	96814-4714	United States	
3/20/17						
Alana Dandrea		Haiku	Hawaii	96708	United States	
3/20/17						
Patrick F		Wailuku	Hawaii	96793	United States	
3/20/17						
Rena Hindman		Mililani	Hawaii	96789	United States	
3/20/17						
Leslie VanBerg		Wahiawa	Hawaii	96786	United States	
3/20/17						
D T		APO	Armed Forces Pacific	96338	United States	
3/20/17						
Donna Shafer		Moore	Oklahoma	73170-1475	United States	
3/20/17						
Stacey Cushing		Chico	California	95927	United States	
3/20/17						
Karen Kriegermeier		Kihei	Hawaii	96753	United States	
3/20/17						
Melanie Whitley		Broomfield	Colorado	80023	United States	
3/20/17						
Tanya Aynessazian		Pahoa	Hawaii	96778	United States	
3/20/17						
Anna James	Humble	Texas	77346	United States		3/20/17

Thomas Fraunhofer 3/20/17	Pittsburgh	Pennsylvania	15220	United States
Cynthia Ross 3/20/17	Bogart	Georgia	30622	United States
H. Steven Coote	Biggar		s0k 0m0	Canada 3/20/17
T. Kazume Martin 3/20/17	Pahoa	Hawaii	96778	United States
ONLY ONE MAUI 3/20/17	KIHEI	Hawaii	96753	United States
Jeanna Allen 3/20/17	Kula	Hawaii	96790	United States
Barb Barry 3/20/17	Woodinville	Washington	98072	United States
Mark Joiner 3/20/17	Kihei	Hawaii	96753	United States
Nikole Milliron 3/20/17	Kihei	Hawaii	96753	United States
annette davidsson 3/20/17	haiku	Hawaii	96708	United States
Heather Dando 3/20/17	Salem	Oregon	97306	United States
Shelley Green 3/20/17	Gaithersburg	Maryland	20878	United States
Kapono Makahanaloa-antunez 3/20/17		Haiku	Hawaii	96708 United States
Bianca Pauleti	HAARLEM		46006	Spain 3/20/17
Tricia Savitt 3/20/17	Studio City	California	91604	United States
Karen Gibson 3/20/17	Mount Vernon		New York	10552 United States
Jane Magill 3/20/17	Greenville	South Carolina	29615	United States
Amy Langman 3/20/17	Hana	Hawaii	96713	United States
Elizabeth Sullivan 3/20/17	Waimea	Hawaii	96743	United States
Justin McCollum 3/20/17	Santa Cruz	California	95062	United States
Abe Galan 3/20/17	Lahaina	Hawaii	96761	United States
Lynn Kopycienski 3/21/17	Kula	Hawaii	96790	United States
Jesse Miles 3/21/17	Pāhoa	Hawaii	96778	United States
Daniel Kopycienski 3/21/17	Kula	Hawaii	96790	United States
Barb Craig 3/21/17	Evans	New York	14047	United States
Angela Worth 3/21/17	kapolei	Hawaii	96707	United States
Paula McCurry 3/21/17	Athens	Georgia	30605	United States
Sara Mason	Kula	Hawaii	96790	United States 3/21/17
laurie ridle 3/21/17	Lahaina	Hawaii	96761	United States
Haunani Bray 3/21/17	Las Vegas	Nevada	89139	United States
Paul Solomon 3/21/17	Haiku	Hawaii	96708	United States
Irene Ryding	Haiku	Hawaii	96708	United States

3/21/17						
Pearl Patterson		Haiku	Hawaii	96708	United States	
3/21/17						
Marilyn Mc Ateer		Lahaina	Hawaii	96761	United States	
3/21/17						
Paula Phillips		Haiku	Hawaii	96708	United States	
3/21/17						
Sylvia Ching	Honolulu	Hawaii	96813	United States		3/21/17
Mavis Oliveira-Medeiros	Hana	Hawaii	96713	United States		3/21/17
Forest Shomer		Port Townsend		Washington 98368	United States	
3/21/17						
Kat Culina		Pahoa village		Hawaii	96778	United States
3/21/17						
Teresa Lopez		Elk Grove	California	95624	United States	
3/21/17						
Erica Hill						3/22/17
Linda Norrington		Los Alamitos		California	90720	United States
3/22/17						
Shannon Kylo		Berthoud	Colorado	80513	United States	
3/22/17						
Bryon Sparks		Wailuku	Hawaii	96793	United States	
3/22/17						
Lauren Reutter		Boulder	Colorado	80301	United States	
3/22/17						
Vicki Schendel		Carvel		T0E 0H0	Canada	3/22/17
Ashley Blizz		Denver	Colorado	80227	United States	
3/22/17						
Annie Young		Boulder	Colorado	80303	United States	
3/23/17						
lucero olson	Riverside	California	92506	United States		3/23/17
Rhio Coreli		New York	New York	10027	United States	
3/23/17						
Jenna Miles		Dartmouth		B2V 2K2	Canada	3/23/17
Cory Missimore						3/23/17
Katherine Morris		Napa	California	94558	United States	
3/23/17						
Nova Covington		Longmont	Colorado	80503	United States	
3/23/17						
Jaspreet Chatta		Pittsburgh	Pennsylvania		15206	United States
3/24/17						
Mike Keating		Honolulu	Hawaii	96815	United States	
3/24/17						
susan fontanes		New Hyde Park		New York	11040	United States
3/24/17						
Debra K Gregory		Hilo	Hawaii	96720	United States	
3/24/17						
Cynthia Harbert		Evergreen	Colorado	80437	United States	
3/25/17						
Sameer Kadhikhaye						3/26/17
kim washick						3/26/17
Timothy Graham						3/26/17
Craig Downs		clifford	Virginia	clifford	United States	
3/29/17						

March 28, 2017

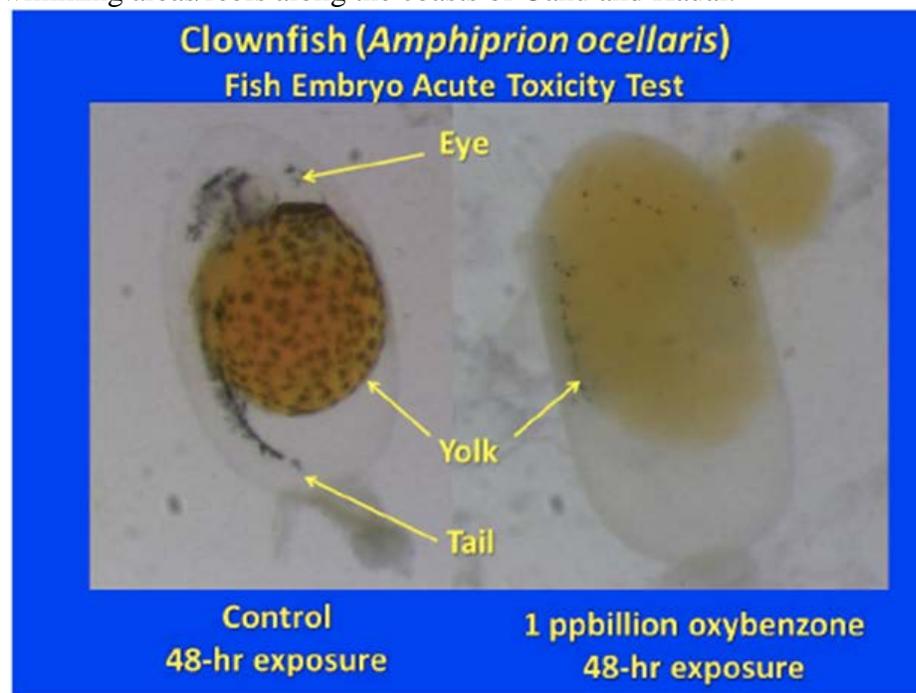
To:

Chairman Rep. Takumi and fellow members of the
Committee on Consumer Protection & Commerce
State of Hawai'i House of Representatives, The Twenty-ninth Legislature

Dear Chairman Lee and the Committee Members,

I was the lead scientist who co-authored the scientific paper in Archives of Environmental Contamination and Toxicology regarding the impact of oxybenzone on coral planula and oxybenzone contamination along the coasts of Hawai'i and the U.S. Virgin Islands. I am also a graduate of the John A. Burns School of Medicine at the University of Hawai'i at Mānoa.

I am very excited that you will be hearing SB1150 SD2 in your committee. Preventing oxybenzone pollution of coral reefs is critical in protecting and bringing back Hawaii's already degrading coral reefs. We now know that oxybenzone impacts not only coral larvae and recruitment, it impacts other important species, such as shrimp, fish, and sea urchins. Already, popular tourism areas in Hawaii that were teeming with life only 20 years ago have become an underwater-wasteland. We see oxybenzone contaminating not just Hawaii's coastal waters, but the fish that we eat that are caught in Hawaiian waters. Preventing oxybenzone pollution is an important tool to help bring back coral and marine life. Coral reefs are valued not just by residents, but tourists and the businesses that depend on the underwater paradise of Hawai'i. The image below is what 1 part per billion OXYBENZONE can do to a fish embryo in 48 hours! This concentration can be seen soon after high tide in areas along Maui's West Coast and in many popular swimming areas/reefs along the coasts of Oahu and Kauai.



The amount of sunscreen that is going into Hawaiian waters is much more than most people would guess. Just an estimate on the number of visitors to a site, and what the American Dermatological Association recommends for the amount of sunscreen use per person for every two hours – the amounts estimated to pollute our waters are staggering, and are consistent with the amount we scientifically determined for Oahu, Maui, and Kauai! (see <http://www.hawaiiocceanambassadors.com/events--projects>)



You will be receiving SB1150, SD2 and it currently states that it “prohibits the use or application of products containing oxybenzone while on a beach or in the ocean unless it is a prescription drug.” Though we support the SPIRIT of this legislative language, we cannot support its limited effects. This lack of effectiveness will remove the onus of responsibility from the cosmetic industry and its associated D.C. lobby groups, and places it directly onto locals, tourists and businesses that interact directly with tourism. **THIS IS WRONG.**

We strongly encourage this committee to consider other options, such as to “**PROHIBIT THE SALE**” of oxybenzone products, similar to the language found in SB260, allowing for a medical prescription to be used. We know that public health is important, and we don’t see a trade-off in protecting both public health and wildlife. There are ample commercial sunscreen products that contain safer active ingredients than oxybenzone, and that these products are sold by the super-majority of manufacturers that distribute their products in Hawaii (e.g., Avene, L’Oreal, Coppertone, Banana Boat, and Neutrogena). These safer products all comply with U.S. Food & Drug Administration’s regulations on SPF values and UV protection and are cost-competitive to oxybenzone products.

We understand this issue is critical and that it has brought national and international attention to Hawaii. Just from looking at previous testimonies, the D.C. Lobby groups are using the same tactics and slogans used during the Tobacco Wars. We ask that you ignore the influence of D.C. lobby groups whose goal is to profit its members, and consider the health and well-being of Hawaiians and their highly valued and imperiled natural marine resources.

Ua Mau ke Ea o ka Aina i ka Pono

Craig A. Downs, Ph.D.
Executive Director

March 2017

Letter of support for oxybenzone bans (Senate Bill 1150 SD2).

Our studies including others studies by scientists, showed that the chemical benzophenones / oxybenzone (e.g. benzophenone-2 and benzophenone-3) an active sunscreen ingredient found in common sunscreen products and cosmetics affects coral larvae viability and is toxic to coral cells *in vitro*. This work is part of a study carried out by our group to assess the effects of chemicals found in cosmetics on marine organisms particularly on coral reefs. We demonstrated that benzophenones, UV filtering chemicals found in commercial sunscreen can cause coral bleaching affect calcification and may even cause death of corals. The last study that published recently showed that Benzophenone-3 affects coral larvae preventing their development and ability to settle and metamorphose. These effects occur at concentrations that are very low, at parts per billion levels. It is important to note that such relative effective levels of this contaminant were actually found in water in Hawaiian beaches, in the Virgin Islands and the Red Sea. The information published in this paper was significant and may led to changes in legislation in Hawaii, The US Virgin Islands and also to motion for a European Parliament resolution on banning benzophenones / oxybenzone in cosmetics (B8-1243/2015).

To summaries, studies showed that the chemical benzophenones / oxybenzone is an endocrine disruptor that induces unnatural calcification of the coral larvae, encasing them in their own skeleton. The presence of oxybenzone in miniscule amounts has been found to have a deleterious impact on coral and other marine life. In light of the large number of swimmers along our shores where coral is found, preventing further harm to our marine life from this chemical is urgent and critical for our long-term economic, cultural, and environmental wellbeing.

Prof. Ariel Kushmaro,

Head of Environmental Biotechnology Lab, Department of Biotechnology Engineering, The Ilse Katz Center for Meso and Nanoscale Science and Technology and NIBN Ben-Gurion University, Beer Sheva, 84105, Israel.


Prof. Ariel Kushmaro
Head of Environmental Biotechnology Laboratory
The Department of Biotechnology Engineering
Ben-Gurion University of the Negev



EKW
RESEARCH
DEVELOPMENT

March 20, 2015

Letter of support for ban of oxybenzone products (Bill nos HB600 HD1; HB818HD2; SB1150 SD2 and HB450 HD1)

To the Hawaii State Legislature,

There is increasing scientific evidence that traces of oxybenzophenones originating from cosmetic sunscreens can be found in aquatic environments with high swimmer pressure. In these studies (including some by our multinational research group) various effects of benzophenones and their derivatives were reported to have deleterious affects on corals, sea urchins, algae, sea grass and additional organisms. Studies by our group further showed that the active ingredients found in these common sunscreens and cosmetics affect coral larval viability and is toxic to coral cells *in vitro*. We demonstrated that these benzophenones, can cause coral bleaching and affect calcification and may even cause death of young and adult corals.

Our most recent published study showed that Benzophenone-3 affects coral larvae preventing their development and ability to settle and metamorphose. These effects occur at concentrations as low, as parts per billion levels, levels that are found in the environment in waters in Hawaiian beaches, in the Virgin Islands and the Red Sea. The information published in this paper is significant hopefully will be taken into account by legislators in Hawaii, the US Virgin Islands. Recently it was also included in a motion for a European Parliament resolution on banning benzophenones / oxybenzone in cosmetics (B8-1243/2015).

A number of studies have shown that these chemicals are endocrine disruptors that induce unnatural calcification of the coral larvae, encasing them in their own skeleton. The presence of oxybenzone in even miniscule amounts in ambient water has been found to have a deleterious impact on marine life. In light of these deleterious effects and the large number of swimmers in areas where corals are found, we call for the prevention of further harm to our marine life from this chemical. We therefore call for a ban of this chemical and its derivatives in sunscreens used in Hawaii in order to maintain healthy reefs and marine environment in the wonderful Hawaiian Islands.

Sincerely

Esti Kramarsky-Winter, Ph.D.
Research Scientist

Support SB1150 SD2

Amend to Ban the SALE of Oxybenzone

March 28, 2017

Dear Chairman Lee and the Committee Members,

I recently learned of your interest in the negative effects of sunscreens that contain Oxybenzone and other chemicals that have recently been shown to affect corals and especially their all-important larvae. I am a Florida native and have been studying coral reefs since the 1950s. I retired from the USGS in 2006 and am now affiliated with the University of South Florida College of Marine Science in St. Petersburg, Florida. I have published many peer-reviewed papers on the geology and growth rates of corals in the Florida Keys.

The studies by Dr. Craig Downs and others showing the toxicity of sunscreens to corals was a real eye-opener since I have been documenting the demise of coral reefs in the Florida Keys for more than 60 years. Initially I assumed the problems were caused by sewage, which is disposed of in septic tanks and shallow injection wells. My studies while with the USGS also demonstrated that sewage contaminated groundwater flows seaward in the Florida Keys and upwells offshore in the vicinity of our coral reefs. Unfortunately these reefs are now mostly dead but were alive and well when I began diving and researching these reefs in the 1950s. During that time I was not aware that Oxybenzone in addition to nutrients is also a component of Keys wastewater. The studies by Downs and his colleagues made me aware that in addition to sunscreen those toxic chemicals can be found in many cosmetic products that ultimately go down the drain when tourists and residents bathe. Those chemicals quickly become components of the wastewater that upwells offshore where they filter through our dying coral reefs. This path of delivery to the reefs has not been adequately considered before but is yet an additional way Oxybenzone reaches coral reef areas. And of course there are the tourists swimming on these reefs often producing an oily slick on the water surface.

Because of these observations I encourage you to ban the sale of Oxybenzone containing products if you wish your reefs to recover to their former health condition.

Sincerely,

Eugene A. Shinn PhD



March 9, 2017

Dear Honorable Members of the Hawai'i Legislature:

I am a co-author of the scientific paper that demonstrated the damaging effects of oxybenzone on coralsⁱ and I urge you to ban the nonprescription sale and use of sunscreens and cosmetic products containing this ingredient.

Oxybenzone damages corals in five different ways. Oxybenzone causes

1. DNA damage
2. cell death
3. deformities in coral larvae
4. coral bleaching, which is a disease
5. increased susceptibility to viral infections.ⁱⁱ

Significant negative effects occur when corals are exposed to minute concentrations of oxybenzone (in the part per billion to part per trillion range), including concentrations lower than those observed on popular Hawaiian beaches. All published scientific evidence agrees: oxybenzone damages corals and other marine life. **I personally do not use sunscreens that contain oxybenzone and I urge my family, friends and colleagues not to use them, either.**

Fortunately, almost every major sunscreen manufacturer has a product that uses safe and effective ingredients such as zinc oxide and titanium dioxide instead of oxybenzone. Lightweight beach clothing such as hats, rash guards, fishing shirts and sundresses also provide protection against UV radiation. When Dr. Craig A. Downs and I did our initial field work in the US Virgin Islandsⁱⁱⁱ, to ensure we were clean, we showered with a harsh laboratory soap and were not allowed to use any personal care products: no sunscreen, no deodorant, no lotion – nothing.

We expected to endure a smelly and sunburned week lugging our SCUBA gear and scientific equipment all over St. John, but that did not happen. Instead, wearing hats and loose-fitting clothing while on land (and working in the shade whenever possible) and lightweight dive skins in the water was sufficient protection. This is an especially good combination for tourists from higher latitudes visiting the tropical shores of Hawai'i.

As a scientist who believes in solving problems, I urge you to ban both the sale and use of sunscreens, sun block and cosmetic products containing oxybenzone. All waters in Hawai'i eventually drain to the ocean, so even sunscreens applied and washed off at home eventually will reach the ocean. A sales ban will be more effective and easier to enforce, and **clever vendors actually could increase sunscreen, sun block and cosmetic sales by offering a discount to any customer who turns in a product containing oxybenzone.**

I spent my honeymoon on O'ahu and Kaua'i, and returned with warm memories of beautiful islands, vibrant marine life and welcoming people. Passing legislation to ban the nonprescription sale and use of sunscreens and other products containing oxybenzone will help ensure that future generations of honeymooners and tourists return with similar memories . . . and perhaps with a new bottle of sunscreen containing safer active ingredients! I urge you to amend SB 1150 to include both a ban on nonprescription sale and use of sunscreens, sun block and other cosmetics containing oxybenzone, and to pass this legislation that is so important for protecting Hawai'i's coral reefs.

Sincerely,

John E. Fauth

John E. Fauth, Ph.D.

Associate Professor of Biology

ⁱ Downs, C.A., E. Kramarsky-Winter, R. Segal, J. Fauth, S. Knutson, O. Bronstein, F. R. Ciner, R. Jeger, Y. Lichtenfeld, C.M. Woodley and P. Pennington. 2016. Toxicopathological effects of the sunscreen UV filter, Oxybenzone (Benzophenone-3), on coral planulae and cultured primary cells and its environmental contamination in Hawaii and the US Virgin Islands. Archives of Environmental Contamination and Toxicology 70(2):265-288.

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- ii Danovaro, R., L. Bongiorni, C. Corinaldesi, D. Giovannelli, E. Damiani, P. Astolfi, L. Greci, and A. Pusceddu. 2008. Sunscreens cause coral bleaching by promoting viral infections. *Environmental Health Perspectives* 116(4):441-447.
- iii Downs, C.A., C. M. Woodley, J. E. Fauth, S. Knutson, M.M. Burtcher, L.A. May, A.R. Avadanei, J.L. Higgins, and G.K. Ostrander. 2011. A survey of environmental pollutants and cellular-stress markers of *Porites astreoides* at six sites in St. John, US Virgin Islands. *Ecotoxicology* 20:1914-1931.



AMEND SB 1150, SD2

PRESERVING CORAL REEFS BY PROHIBITING THE SALE OF OXYBENZONE-CONTAINING PRODUCTS!

March 28, 2017

Aloha Chair Rep. Takumi and Members of the Committee:

On behalf of the team here at Hawaii Mermaid Adventures operating in the beautiful waters of Maui, WE STRONGLY ASK that you amend Senate Bill 1150, SD2 to a ban on the sale of sunscreen and products that contain oxybenzone.

The growing numbers of visitors are having an impact on the reef systems. Every step we can make to improve the life of our single greatest visitor attraction and lifeblood of Hawaii we must take.

The coral reefs, and our businesses, do not have the luxury of time for half measures or political indecision. Our reefs are disappearing NOW, and we need to protect them so they can restore themselves.

Our team is committed to doing the right thing and we will strongly support everyone who understands the importance of saving our reefs from these and other harmful chemicals.

Mahalo,

Lila Jones
Head Instructor



Strongly Supporting Amendment to SB1150 Banning the SALE of Oxybenzone Products

March 28, 2017

Aloha Rep. Takumi and Members of the Committee:

On behalf of myself and the entire team at Hawaiian Paddle Sports we strongly support the amending SB1150, SD2 to **"PROHIBIT THE SALE"** of oxybenzone products, similar to the language found in SB260, allowing for a medical prescription to be used.. Oxybenzone products must be banned in Hawaii and across the US as they are harming our reef systems.

Only a complete ban on these types of sunscreens will be acceptable.

Our employees depend on the income derived from a healthy prosperous reef. Visitors come all the way to Hawaii to have a quality reef experience. We must continue to provide help, improve and protect that which we all hold so dear.

Please support and amend SB1150, SD2 as a "BAN on SALES" and make it known that Hawaii is at the forefront of eco-friendly and sustainable tourism efforts worldwide.

Mahalo,

Tim Lara
Owner



March 28, 2017

Dear Rep. Takumi and
Members of the Committee on Consumer Protection & Commerce,

As an aquarist and researcher at the National Aquarium, I was one of the co-authors the scientific paper in Archives of Environmental Contamination and Toxicology regarding the impact of oxybenzone on coral planula and oxybenzone contamination along the coasts of Hawai'i and the U.S. Virgin Islands. I now am working with SEA LIFE Aquariums and the SEA LIFE TRUST.

Research concludes that oxybenzone can have detrimental effects to all marine life, including changes in fish behavior, pathological changes to fish sexual identity, damage to genomic and DNA integrity, and may suppress restoration of coral reefs by preventing juvenile corals to recruit into an area that is polluted by oxybenzone.

There are many other ways to protect skin from the damage of the sun and passing a ban on the sale of products containing oxybenzone (unless it is a medical prescription by a medically licensed physician) can effectively reduce the oxybenzone entering the ecosystems.

The SEA LIFE TRUST and I support SB 1150, SD2 and it being amended to "Prohibit the Sale of Oxybenzone products unless a medical prescription", as being an effective means in reducing oxybenzone pollution.

Respectfully submitted,

Kelli Cadenas
Curator
SEA LIFE Michigan



In The Name of God

Institute of Geophysics
University of Tehran

No.

Date.

March 19th, 2017

To Members of the entire State of Hawaii Legislature and the Honorable Governor David Ige,

I am an environmental scientist at the Institute of Geophysics - University of Tehran, Tehran, Iran. I have been studying the impact of human activities on the marine environment.

I want to express my support for the legislation to mitigate sunscreen pollution in Hawaii.

Oxybenzone in the marine environment can have detrimental effects to all marine life, DNA damage to marine organisms, it can act as an endocrine disruptor affecting larval development and reproductive success, and its pollution can suppress the natural restoration of coral reefs after a degradation event, such as a mass coral bleaching event.

Passage of a ban on the sale of products containing oxybenzone (unless it is a medical prescription by a medically licensed physician) can be a VERY effective means in mitigating oxybenzone pollution in both coastal and inland waters.

Your efforts in legislative conservation have been noted around the world, and we applaud your effort and leadership.

Respectfully submitted,

S. Abbas Haghshenas, PhD.
Assistant Professor in Physical Oceanography
Institute of Geophysics - University of Tehran
Tehran, Iran
Tel: +98 21 6111 8318
Email: sahaghshenas@ut.ac.ir



School of Geography
and Earth Sciences

1280 Main Street West
Hamilton, Ontario, Canada
L8S 4K1

To:
Chairman Rep. Chris Lee and Committee Members
Committee on Energy and Environmental Protection
State of Hawaii

From:
Dr. Michael J Risk
Durham ON Canada

Date: Mar. 15, 2017

Re: Oxybenzone.

Dear Chairman Lee:

I am a coral reef ecologist, with many years of experience in the Pacific. To date, my work has been cited almost 8000 times in the scientific literature. I have been to Hawaii several times, as a guest of your federal government. I have been greatly impressed by the mind-boggling bounty of beauty in this state. It would seem to me to be sensible to preserve what you have.

I try to keep up with recent science, and to those of us who know the literature, it is absolutely no secret that oxybenzone is a coral killer. The damaging effect on coral larvae can be seen at unbelievably low concentrations. Not only that, oxybenzone is incorporated into the food chain so that it contaminates human food.

The use of this compound in sunscreen can no longer be defended. Many companies produce more reef-friendly products at competitive prices. The only reason to continue with this compound is: greed.

I understand you will be reviewing legislation called SB1150 SD2 in your committee. This would be a good start, but as worded, it prohibits the use of, rather than the sale of. With the scientific picture being so clear, it would make much more sense simply to ban the sale of any products containing oxybenzone in the state of Hawaii.

It is interesting that this struggle has reached around the world. Globally, coral reefs are in terrible shape, under threat from a host of sources. Removing this one threat would be easy to do, and would send a message. I hope you understand that I am not interfering here, I am commenting as a concerned scientist.

A handwritten signature in black ink, appearing to read "M Risk".

MJRiskEnvironmental Ltd.
PO Box 1195, Durham ON
Canada



Strongly Supporting SB 1150 SD2, but to Amend as a Prohibition of Sale

March 28, 2017

Aloha Chair Takumi and Members of the Committee:

On behalf of all our employees at Maui Kayak Adventures we strongly urge you to support the bill SB 1150SD2, but please amend this legislation so that it more closely resembles SB260 or HB818 v2, which is the **Prohibition of sale of oxybenzone products unless a medical prescription**. Ban oxybenzone sunscreen across Hawaii and give our reefs another chance to survive.

The reefs are under siege from a variety of human and natural events. This is one simple thing we can do to help it withstand the assaults. Our organization is taking proactive steps to teach guests about the harms they can do to our precious reefs. Reef Safe Sunscreen is part of that lesson.

None of the other bills goes far enough to really impact the health of our reefs. Support A Ban on Sales to make Hawaii a tourism leader. There are a large number of FDA-approved sunscreen products that can be used instead of oxybenzone-containing products. Banning oxybenzone products is NOT a compromise between people's health and well-being, and the conservation and restoration of Hawaii's precious coral reefs. Our coral reefs are disappearing, and we don't need half measures that are not effective in protecting our coral reefs!

Mahalo,

Kathi Sollars
Manager

Maui Kayak Adventures , 551 S Kihei Rd Kihei, HI 96753 United States (US)

<https://maui kayak adventures.com>



Amend SB 1150 SD2 to Prohibit the Sale of Oxybenzone Products!

March 28, 2017

Aloha Chairs and Members of the Committee:

We strongly support an amendment of SB1150 SD2 to “**PROHIBIT THE SALE of oxybenzone products**” for a number of reasons:

1. Banning oxybenzone which harms marine life and disrupts reef activity causing damage.
2. The success of SB1150, SD2 will bring to light on a national level the state of our environment and immediately put Hawaii in the forefront of tourism worldwide.
3. The educational opportunities from this ban will afford can also greatly improve other aspects of the tourism and go far to repair the relationship residents of the islands have with tourism.
4. It shows respect to the Hawaiian culture that cared for the reefs and managed them for hundreds of years.
5. It gives the residents of Hawaii confidence that their government is making the right decisions for the good of the reef. Now more than ever we need confidence in our lawmakers to stand up and do the right thing.
6. Our clients depend on beautiful reefs for paying tours. Increasing Average Daily Rates without adding more visitors are dependent on a healthy reef to show off. We need to make all investments in it we can.

Please give your full support to amending SB1150 as a BAN on the sale of oxybenzone products!

Mahalo,
Daniel Logtenberg
President



Do The Right Thing Support Sb 1150

March 28, 2017

Aloha Rep Takumi and Members of the Committee on Consumer Protection and Commerce:

We are writing to you today to encourage you to consider SB 1150, SD2 by amending the bill and change it from a “ban on the beach” to “**PROHIBIT THE SALE**” of oxybenzone products, similar to the language found in SB260, allowing for a medical prescription to be used.

Coral reefs are degrading all over coast of Hawaii. More importantly, the reefs that sustain tourism in Maui has been a precipitous decline in the past 15 years. We know there are many factors causing their decline, but a healthy system can bounce back quickly. Removing oxybenzone pollution from our coastal waters gives the reefs a chance to heal, and become a beautiful place for both locals and tourists. Tourism depends on having a beautiful reef and it's under attack from multiple angles. Sunscreen is one of them.

You only have to look under a big boat that drops people off at Turtle Town to see the clouds of non-reef-safe sunscreen drifting thru the water.

We are asking that you do the right thing for our environment and the marine life which so many visitors come to see.

Mahalo,

Laurie Pyle
Head Guide



Please Amend SB 1150 SD2 To Ban the SALE of Oxybenzone Products

March 28, 2017

Aloha Chair Rep Takumi and Members of the Committee on Consumer Protection & Commerce:

On behalf of myself and the entire team at Maui Surf Lessons we strongly encourage and support amending of SB 1150, SD2 to BAN the SALE of Oxybenzone products, unless . Oxybenzone products must be banned in Hawaii and across the US as they are harming our reef systems.

Only a complete ban on these type of sunscreens will be acceptable. Labeling products as dangerous will not be effective!

Our employees depend on the income derived from a healthy prosperous reef. Visitors come all the way to Hawaii to have a quality reef experience. We must continue to provide help, improve and protect that which we all hold so dear.

Please amend SB 1150 and make it known that Hawaii is at the forefront of eco-friendly and sustainable tourism efforts worldwide.

Mahalo,

Tim Lara
Owner

Committee on Consumer Protection & Commerce
March 28, 2017 Hearing

Dear Rep. Ing and Members of the Committee for OMH,

Dear members of the legislature:

I am resident of Virginia but I travel to Hawaii as a tourist to enjoy the beautiful beaches in Coral. Snorkeling in Maui was a highlight of my last visit and I was sorry to know that the coral is being degraded, in part by oxybenzone. I am reluctant to go back to Hawaii just to watch the coral be destroyed.

Please work hard to protect your most precious natural resource for us to enjoy and for nature to use by banning oxybenzone based sunscreen. For too long the oceans and coral have been ignored by the general public and our representatives. It is time for you to take heroic action and do the right thing. Also remember that banning oxybenzone will in the long run save jobs and bring more tourist money to Hawaii.

Thank you

Stephen C Martin
589 Naked Creek Lane
Amherst, VA 24521



SPANISH MINISTRY
OF ECONOMY AND
COMPETITIVENESS



Institute of Environmental Assessment
and Water Research (IDAEA)
SPANISH NATIONAL RESEARCH COUNCIL (CSIC)

From:
Silvia Díaz-Cruz, Ph.D.
Spanish National Research Council (CSIC)
Institute of Environmental Assessment and Water Research (IDAEA)
Barcelona, Spain

Barcelona, 20th March 2017

TO WHOM IT MAY CONCERN

Hereby I, Dr. Silvia Diaz Cruz, from the Spanish National Research Council CSIC, (Spain) want to support the prohibition of the use or application of products containing Oxybenzone, also known as Benzophenone-3, 2-Hydroxy-4-methoxybenzophenone and (2-Hydroxy-4-methoxyphenyl)-phenylmethanone (IUPAC name), in areas close to marine ecosystems to help marine life preservation. So far there are many evidences supported by reliable scientific studies published in prestigious scientific journal, showing the risk this sunscreen agent pose for marine environments, and especially relevant for coral reefs.

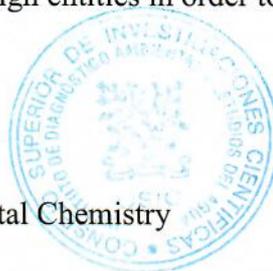
Based on my own scientific research experience of more than a decade studying the impact of UV filters and blockers in the environment, I support SB1150 SD2.

The CSI) is the largest public institution dedicated to research in Spain and the third largest in Europe. Belonging to the Spanish Ministry of Economy and Competitiveness through the Secretary of State for Research, Development and Innovation, its main objective is to develop and promote research that will help bring about scientific and technological progress, and it is prepared to collaborate with Spanish and foreign entities in order to achieve this aim.

Silvia Díaz-Cruz

Researcher at the Department of Environmental Chemistry
IDAEA-CSIC

E-mail address: sdcqam@cid.csic.es



id^ae^a

C/ Jordi Girona, 18
08034 Barcelona. Spain
Tel. 93 400 61 00
Fax.: 93 204 59 04



We Strongly Support SB 1150

March 28, 2017

Aloha Chairs and Members of the Committee on Consumer Protection and Commerce:

We strongly support any effort that improves the health of our reef systems. A healthy reef improves all water activities, provides for more fish and habitat for many endangered species. You must support a full ban on oxybenzone containing sunscreens and skincare products. The livelihood of thousands in the tourism industry are at stake and we trust that you will do the right thing and hear SB1150 SD2.

Though we support the SPIRIT of this legislative language, we cannot support its consequences. Such adverse consequences will remove the onus of responsibility from the cosmetic industry and its associated D.C. lobby groups, and places it directly onto locals, tourists and businesses that interact directly with tourism. **THIS IS WRONG.**

We strongly encourage this committee to amend the bill to "**PROHIBIT THE SALE**" of oxybenzone products, similar to the language found in SB260, allowing for a medical prescription to be used. We know that public health is important, and we don't see a trade-off in protecting both public health and wildlife.

No other bill out there does enough to protect our primary industry driver from sunscreen and skin care products that utilize harmful chemicals. Many of these products are not made in the islands and banning them will only encourage a larger local industry where the profits stay in Hawaii.

Make Hawaii known throughout the world as the top tourism destination in the world and the best place to live by amending SB1150 to "**PROHIBIT THE SALE**" of oxybenzone products.

Yours,

Ray Hutaff
Vice President



March 28, 2017

To Members of the entire State of Hawaii Legislature and the Honorable Governor David Ige,

I am one of the scientists who co-authored the scientific paper in Archives of Environmental Contamination and Toxicology regarding the impact of oxybenzone on coral planula and oxybenzone contamination along the coasts of Hawai'i and the U.S. Virgin Islands. I am a world-expert on coral reproduction and coral recruitment biology and physiology.

Oxybenzone in the marine environment can have detrimental effects to all marine life, including changes in fish behavior, pathological changes to fish sexual identity, damage to genomic and DNA integrity. It is known to impact sea urchin development, as well as reduce the viability of sea urchin sperm at concentration that are commonly found in high tourist areas in Hawaii. Furthermore, oxybenzone in the study by Dr. Parades and co-workers demonstrate its impacts in embryos and larvae of bivalves (mussels), shrimp, and even important reef algae.

Most importantly, oxybenzone may suppress restoration of coral reefs by preventing juvenile corals to recruit into an area that is polluted by oxybenzone. This is critical for Hawaii in the faces of disastrous effects of mass bleaching events of last year, and perhaps to continue into the summer of 2017. My work has shown that coral reefs can survive and recover after a mass bleaching event if in an unpolluted environment (Stone et al. 1999. Ecology Letters 2:325-330). What is critical are the conditions that allow for a natural recovery. Oxybenzone is an agent that can prevent a natural recovery.

Passage of a ban on the sale of products containing oxybenzone (unless it is a medical prescription by a medically licensed physician) can be a VERY effective means in mitigating oxybenzone pollution in both coastal and inland waters.

I am supporting S1150, SD2/HD2 to restrict oxybenzone-product use in Marine Life Protection areas and to BAN the sales of oxybenzone products at concession stores serving Hanauma Bay and other Marine Protected areas. I also encourage the committee to consider banning the SALE of ALL OXYBENZONE products in the State of Hawaii without a medical prescription as being an effective means in reducing oxybenzone pollution. I strongly recommend that the bill be expanded.

Respectfully,

A handwritten signature in black ink, appearing to read 'Y. Loya'.

Yossi Loya, PhD
Professor (Emeritus) of Marine Ecology
Department of Zoology, Tel Aviv University



Executive Officers:

John Erickson, Young's Market Company –Chair
Beau Oshiro, C&S Wholesale – Vice Chair
Toby Taniguchi, KTA Superstores – Secretary/Treasurer
John Schilf, Rainbow Sales and Marketing - Advisor
Stan Brown, Acosta – Advisor
Paul Kosasa, ABC Stores – Advisor
Barry Taniguchi, KTA Superstores – Advisor
Derek Kurisu, KTA Superstores – Immediate Past Chair
Lauren Zirbel, Executive Director

1050 Bishop St. PMB 235
Honolulu, HI 96813
Fax: 808-791-0702
Telephone: 808-533-1292

FROM: HAWAII FOOD INDUSTRY ASSOCIATION
Lauren Zirbel, Executive Director

TO:
COMMITTEE ON CONSUMER PROTECTION & COMMERCE
Rep. Roy M. Takumi, Chair
Rep. Linda Ichiyama, Vice Chair

DATE: Thursday, March 30, 2017
TIME: 2:00 PM
PLACE: Conference Room 329

RE: SB1150, SD2, HD2

Position: Oppose

The Hawaii Food Industry Association is comprised of two hundred member companies representing retailers, suppliers, producers, and distributors of food and beverage related products in the State of Hawaii.

We know for a fact that if a person wears sunscreen every day, their risk of developing deadly skin cancer drops dramatically. We have no evidence to indicate that the state of Hawaii banning sunscreen will prevent or even reduce coral bleaching. It seems that we should rely on proven science to protect residents and visitors from deadly UV radiation instead of moving forward with a bill that has no proven benefit to the environment. Imagine the impact on tourism if people who visit Hawaii are no longer allowed to apply skincare products to protect their skin!

In January 2011, definitive clinical research from Australia showed for the first time that sunscreen can drastically reduce melanoma incidence. Researchers found that daily application of an SPF 16 sunscreen to the head, neck, arms, and hands reduced melanoma incidence by 50 percent in subjects studied for more than a decade. Only 11 melanomas developed in the daily sunscreen users, vs. 22 in the control group. Even more impressively, *invasive* melanomas (those that penetrate beyond the skin surface)

were reduced by **73 percent** (3 tumors vs. 11), and those that were found in the sunscreen group were smaller on average and more readily curable (**Green et al., 2011**).

The best sunscreen is one that people can apply every day. Chemical sunscreens rub in clear and are very easy to apply. Physical sunscreens are harder to rub in and have a white tint. The difficulty to rub in product and the look at feel of the product has a big impact on people's willingness to wear that product every day. The vast majority of the time when people apply sunscreen they do not go in the ocean.

This measure requires that, "the department of land and natural resources to propose rules prohibiting the use of sunscreen, sunblock, or cosmetic containing oxybenzone or other chemicals deemed harmful to coral reefs by the department in any area as needed to conserve state marine resources." In other words, it allows DLNR to ban any ingredient without any process for how it is deemed "harmful". This is extremely dangerous and over reaching. Banning any product or ingredient without a very thorough look at the impact of such a ban can have disastrous consequences.

Please read the NOAA page on coral bleaching. There is not one mention of sunscreen. The four reasons listed by NOAA are: (1)changes in ocean temperature, (2)runoff and pollution, (3)overexposure to sunlight, and (4)extreme low tides.

http://oceanservice.noaa.gov/facts/coral_bleach.html

We believe a prohibition on sunscreen is extremely premature, given that scientists are still monitoring and assessing the effects of climate change on oceans and marine life and overwhelming evidence shows that global warming causes coral bleaching. Coral bleaching is occurring in areas with very little human interaction, thus very little sunscreen exposure. The body of evidence on coral bleaching does not support blaming coral bleaching on sunscreen.

"Terry Hughes, director of the Australian Research Council Centre of Excellence for Coral Reef Studies at James Cook University, told Mashable Australia he thought the report's findings were inconclusive. 'This particular study was done in a laboratory, so they actually used artificial sea water,' he explained. 'They put tiny bits of coral into aquaria and then added some chemicals. It's not surprising coral don't like chemicals thrown at them.'"¹

At a minimum we should wait for studies conducted in the open ocean to come back before further action is taken. There is a bill to study the effects of sunscreen moving this year. Hawaii is the only state in the USA to introduce legislation banning sunscreen. Once more research is conducted in the natural environment we will have more evidence to make an informed decision. Please don't rush into this extreme action without proper research. A higher bar must be met when dealing with cancer prevention. Perhaps a more appropriate response would be a public education campaign about how to properly apply sunscreen as to reduce product that may wash off in the ocean as well as the importance of skin protecting clothing for use in water sports.

¹ *No, your sunscreen isn't killing the world's coral reefs.*

<http://mashable.com/2015/11/10/sunscreen-killing-coral-reefs/#BXST6P0wq5qS>

The combination of reduced choice and less effective products could have the dangerous consequence of individuals using less protective sunscreens or worse, no longer using sunscreen, thereby causing more skin damage and potentially increasing skin cancer rates.

The Impacts of Skin Cancer

Over 5 million cases of non-melanoma skin cancer are treated in more than 3 million Americans every year. Every year there are more cases of skin cancer than the combined incidents of breast cancer, prostate cancer, lung cancer, and colon cancer combined.

Over the last 30 years, more people have experienced skin cancer than all other cancers combined. One out of five Americans will develop skin cancer in their lifetime. One person dies of melanoma every hour. Melanoma, which is largely caused by sun exposure, accounts for less than 1 percent of skin cancer cases, but results in the vast majority of skin cancer deaths. A person's risk of melanoma doubles if he or she has had more than five sunburns.

Hawaii has about 200 new cases of melanoma a year, and about 20 people die from it annually.

Hawaiian tourism is one of the state's largest industries, and these numbers do not include cases observed amongst those visitors.

Oxybenzone And The Environment

The exposure of the environment to cosmetic and personal care products is relatively low compared to contaminants from other industrial sectors. There is no scientific evidence that sunscreen ingredients, including oxybenzone, contribute to the decline of native coral reef colonies. **According to the U.S. National Oceanic and Atmospheric Administration's (NOAA) Coral Reef Conservation Program, coral reefs are threatened by an increasing array of impacts – primarily from global climate change, unsustainable fishing and other factors. Increasing ocean temperature and acidification, overfishing, coastal development and pollution are well known stressors on coral reefs.** They may induce coral bleaching, a process by which corals lose their symbiotic microalgae.

Ultimately, corals may die when these stressful environmental conditions last too long. Weakened corals, more susceptible to infectious diseases, show poor resilience from episodic bleaching events. Studies have shown that five weeks of chronic exposure to these UV filters at concentrations above those reported in natural sea waters, did not induce coral bleaching nor reduce the photosynthetic efficiency of the symbiotic micro-algae.²

² 26th Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC), conducted at La Cité Nantes Congress Center in Nantes, France, from 22 - 26 May 2016

Predictive laboratory methodology to assess coral bleaching: application to UV filters

J. Fel, L'Oréal Research & Innovation, Aulnay-sous-Bois, France / Environmental Research; M. Leonard, L'OREAL SA

Increasing ocean temperature and acidification, overfishing, coastal development and pollution are well known stressors on coral reefs. They may induce coral bleaching, a process by which corals lose their symbiotic microalgae (zooxanthellae). Ultimately, corals may die when these stressful environmental conditions last too long. Weakened corals, more susceptible to infectious diseases, show poor resilience from episodic bleaching events. Some studies have reported that certain UV filters (mostly 4-methylbenzylidene-camphor, benzophenones and octylmethoxycinnamate) contained in sunscreens lotions and washed off by swimmers, could contribute to coral bleaching. Media took it for granted and suspicion has been extended to all organic UV filters present in sunscreens products. The present study was aimed at clarifying the potential effect that organic UV filters (such as Avobenzone, Octocrylene, Terephthalylidene-dicamphor sulfonic acid, Silatrizole, etc...) may have on different coral species. Two

A higher standard of evidence must be met before the legislature bans products that provide a convenient way for individuals to wear sunscreen every day to prevent skin cancer. Oxybenzone is an extremely effective ingredient that rubs in clear and is contained in over 80 percent of consumers' favorite everyday choices for sunscreen.

Thank you for the opportunity to testify.

herbicides (Monuron and Diuron) were used as positive references. First a preliminary laboratory screening test was developed to assess potential adverse effect of short exposure (48h) to elevated concentrations (from 1 to 100 mg/L) of the compounds. As a sublethal endpoint predictive of coral bleaching, chlorophyll photosynthetic efficiency of the symbiotic micro-algae (zooxanthellae) was monitored with PAM (Pulse Amplitude Modulated) fluorimetry on nubbins of hard coral species *Seriatopora caliendrum* and *Stylophora pistillata* In a second step, coral nubbins of *Stylophora pistillata* (hard coral) and *Turbinaria reniformis* (soft coral) were exposed for 5 weeks at lower concentrations in 15 liters aquariums, under semi static conditions with weekly solution renewal. **A specific analytical methodology was developed, combining automated solid phase extraction with UPLC-UV detection, to monitor the compounds concentrations in sea water and analyze large number of samples. 5 weeks of chronic exposure to these UV filters at concentrations above those reported in natural sea waters, did not induce coral bleaching nor reduce the photosynthetic efficiency of the symbiotic micro-algae.**

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 12:33 PM
To: CPCtestimony
Cc: malamaopuna@yahoo.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Rene Siracusa	Malama O Puna	Support	No

Comments: Malama O Puna is a 501(c)(3) Hawaii environmental nonprofit that has been advocating for 27 years. We were involved with the establishment of the Wai 'Opae Marine Life Conservation District in Puna, which features beautiful coral gardens that draw many thousands of tourists a year. Those gardens, which are a State resource, are being adversely affected by the oxybenzone in sunblock products that wash off the skin of swimmers and scuba divers. Since coral, a living organism, is also threatened by bleaching and global warming, any steps we can take to reduce impacts can only benefit the environment, local residents, and the tourist industry. In this case, the fix is simple, because there are a lot of effective sunscreen products that do NOT contain oxybenzone. This bill is a no-brainer. Please give it your overwhelming support. Mahalo nui loa, Rene Siracusa, President

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

Do not reply to this email. This inbox is not monitored. For assistance please email webmaster@capitol.hawaii.gov

To Honorable Representative Roy Takumi, Chair, CPC.

Testimony in SUPPORT SB1150, SD2, HD2

Hearing Date 3-30-17; Conference Room 329; 2PM

Aloha,

Please see the attached research information in support of banning toxic chemicals in sunscreens, along with our petition signatures and comments from 580 of our supporters.

This issue has wide support from both Hawaiian residents, and from our kind tourists from all around the world, who are happy to support us in preserving our environment.

We understand that oxybenzone is highly toxic to both coral and humans - it causes cancer, entering the bloodstream within 24 hours of application, and is a top allergen according to dermatologists. This toxic chemical does not belong on our skin or in the ocean.

Please do not allow the DC Lobbyists with the chemical industry to decide the fate of our precious natural resources. There is plenty of profit to be had in the tourist industry, the fishing industry, and the natural cosmetics industry. There is no need to harm the environment to protect mainland chemical industries.

We do understand that many Hawaii legislators are supported by these DC lobbyists, and are voting against the interests of Hawaii. Please allow yourselves to support this measure and do the right thing for our people and environment.

We do have the research, we do have the alternatives. And in Hawaii, our economy IS our environment! Protect the reefs - please act now to ban toxic chemicals in sunscreens!

Thank you for your sincere concern,

Sylvia Litchfield,
Co-chair, Maui County Green Party

[619-987-3722](tel:619-987-3722)
415 Dairy Rd.
Suite # E 414
Kahului, HI 96732

To Honorable Representative Roy Takumi, Chair, CPC.
Testimony in SUPPORT SB1150, SD2, HD2
Hearing Date 3-30-17; Conference Room 329; 2PM

From Sylvia Litchfield
Co-Chair, Green Party of Maui

sylvialitchfield@gmail.com
619-987-3722
415 Dairy Rd.
Suite # E 414
Kahului, HI 96732

Or Petition, in SUPPORT of SB1150, SD2, HD2

CORAL REEFS vs SUNSCREEN: A chemical called oxybenzone which is found in sunscreen and other personal care products is decimating coral reefs, making coral more susceptible to bleaching. More than 50 percent of coral off the West Hawaii coastline has bleached and possibly died this summer. Any small effort to reduce oxybenzone pollution could mean that a coral reef survives a long, hot summer, or that a degraded area recovers. While there are a lot of things we can't do anything about, this is one thing we can do right now for the environment.

To see our online petition with additional signatures and comments: <https://www.change.org/p/hawaii-state-legislators-take-action-to-protect-hawaii-s-dying-coral-reefs-ban-toxic-chemicals-in-sunscreen>

COMMENTS: (Please see previous document for all signatures.)

Protect Hawaii's coral reefs: ban toxic chemicals in sunscreen.

Name	City	State	Zip	Country	SignedOn	Comment
Stacy Porteus 1/26/17	Mahalo	Kailua-Kona	HI	96740	United States	Mahalo Green Party of Maui for helping to protect Hawaii's coral reefs!
Sylvia Litchfield 1/26/17	Kahului	HI	96732	United States		"For more information about defending our oceans: http://www.marinesafe.org/ " rel="nofollow"> http://www.marinesafe.org/ Thanks to Marinesafe!"
Valerie Wickert 1/26/17		Honolulu	HI	96822	United States	want a living reef. 1/26/17 I
eric feingold 1/26/17		Haiku	HI	96708	United States	Reef Madness 1/26/17
Mirella von Lindenfels 1/26/17		Hurstpierpoint	ENG	bn6 9ql	United Kingdom	Hawaii needs its coral
Linda Cherry 1/26/17		Spartanburg	SC	29306	United States	Our planet depends on doing everything that we can for our environment.

Jacob Peacock	Des Moines	IA	50317	United States		
1/26/17	I am a citizen concerned with our natural wildlife and healthy ecosystem					
Vija Sehgal	Kailua	HI	96734	United States	1/26/17	Our reefs are precious and deserve protection.
Christina Comfort	Honolulu	HI	96822	United States	1/26/17	"I am Christina Comfort, a professional coastal oceanographer at the University of Hawaii. I live in Makiki, and I support this legislation. I carry out long term environmental monitoring in coastal environments in the Pacific Islands, including here in Hawaii and elsewhere. Science has shown again and again that coral reefs are A) Incredibly important to biodiversity, provide storm protection to island communities, are important sources of food, and are a driving force in the tourism economy that many island communities rely heavily on; and B) That coral reefs are impacted by a multitude of stressors ranging from global stressors such as warming ocean temperatures and acidification to local effects from overfishing, nutrient input from runoff, and pollution (such as that from oxybenzone input into coastal waters in the form of sunscreen and cosmetics). The more stressors impacting a reef system at a time, the more likely the coral organisms will be overwhelmed by physiological stress, bleach their food-providing symbionts, fail to recover, and ultimately die. Preventing oxybenzone sunscreens from being sold in HI will help prevent them from impacting our coral reefs. This is the easiest and fastest way to reduce stress on corals in our local ecosystems. Alternative sunscreens exist (zinc oxide, titanium dioxide) that have not been shown to have the same toxic effects on corals, and we can educate the public that these alternatives are available and effective for their sunscreen needs. Additionally, oxybenzone is a known endocrine disruptor in humans - alternative sunscreens are healthier for our bodies as well as the reef. Taking this simple step will reduce the stress on Hawaii corals, and better enable them to cope with a multitude of environmental stressors and recover from large-scale bleaching events. Support for this legislation is NEEDED if we hope to give our reefs a fighting chance for survival in the future. This is a local, directed action which can have an immediate impact on improving the resiliency of our coral reefs here in Hawai'i."
teressa beard	makawao	HI	96768	United States	1/27/17	All reefs should be protected from these chemicals!
cathy knowlton	Haiku	HI	96708	United States	1/27/17	Stewardship of our planet is essential.
Ikue Ebersole	Valby			Denmark	1/27/17	I love Hawaii and its beauty!! I would like it to stay beautiful and i would like to come back again and again.
Alana Beckel	Kula	HI	96790	United States	1/28/17	I love our oceans and want to protect them and everything in it!!
Alex Beers	Wailuku	HI	96793	United States	1/29/17	"Its the right thing to do, simple."
Yasmin Myers	Kapolei	HI	96707	United States	2/2/17	I have witnessed the decline in coral and seaweed in the oceans and beaches of Hawaii.
Timothy Smith	Oakland	CA	94606	United States	2/2/17	Save the reef!
Dennis B Miller	honolulu	HI	96815	United States	2/2/17	"without coral reefs our entire planets eco system will collapse, resulting in the end of life as we know it. "

Maria Van Geel Zdroisko Poland 2/2/17 Getekend
grouci djamila nanteuil les meaux J 77100 France
2/2/17 "Protégez les récifs coralliens d'Hawaii: interdiction des produits chimiques toxiques dans l'Écran solaire.
Parti Vert de Maui

86

Partisans

CORAL REEFS vs SUNSCREEN: Un produit chimique appelé oxybenzone qui se trouve dans l'Écran solaire et d'autres produits de soins personnels est décimer les récifs coralliens, ce qui rend le corail plus sensible au blanchiment. Plus de 50 pour cent de corail au large de la côte ouest de Hawaï a blanchi et peut-être décédé cet été. Tout petit effort pour réduire la pollution oxybenzone pourrait signifier qu'un récif de corail survit à un long été chaud, ou qu'une zone dégradée se rétablit. Bien qu'il y ait beaucoup de choses sur lesquelles nous ne pouvons rien faire, c'est une chose que nous pouvons faire maintenant pour l'environnement.

Nous soutenons la législation du sénateur Will Espero pour Hawaï, pour interdire l'Écran solaire à l'oxybenzone à partir de 2018.

Cette pétition sera remise à:

...tats-Unis

...tats-Unis"

MG Thiam 7819 Spain 2/2/17 step one is most probably not to harm ocean life any longer. step two is starting now to support its process of regeneration. for the love of our children and mother earth.

Chris Young Dartmouth NS B2V 2S1 Canada 2/2/17 "Have NEVER used sunscreen, believe it poisons you due to chemicals! This just reinforces my belief!"

mathieu papatie val d'or J9P-5L5 Canada 2/2/17 JE SUIS CONTRE LA CRUAUT... ANIMAL CAR ILS M...RITE DE VIE EN PAIX EN LIBERT... EN NATURE AVEC NOUS JE VOUS DEMANDE DE SIGNER POUR LA VIE DE NOS SANS VOIX MERCI POUR VOTRE SOUTIEN.

Marga Star Eindhoven 9471CV Netherlands 2/2/17 "Protect Hawaii's coral reefs, ban toxic chemicals in sunscreen.

Austin Fryar Pahoa HI 89072 United States 2/2/17 Save the reef and ban the chemicals in sunscreen that are not just poisonous to the reef but is too in the long term

Fernande Fournier Luxembourg Luxembourg 2/2/17 "Wir haben die Pflicht unseren Planeten zu respektieren und zu beschützen. Nehmen, Sie Ihre Verantwortung, bitte. Helfen und handeln Sie menschlich und zügig. Zivilisierte, Gesellschaft? Manche "" Menschen "" sind nicht über allem erhaben! Man erntet stets das was man sät. Vergessen, Sie dies nicht. Merci. "

Susannah Gelbart Las Vegas NV 89149 United States 2/3/17 Save coral reefs from sunscreen and the aquarium trade.

___ 004_0801 Japan 2/3/17 ___

Gayle O'Donnell Koloa HI 96756 United States 2/3/17 I've seen the degradation of Kauai's reefs in the 11 years I've lived here...amazing and horrible! I use a product called Reef Safe I really like! Lotion or pump spray/not an aerosol!

catherine cheneval LYON 73000 France 2/3/17 PROTEGER LE RECIF CORALLIEN / HAWAII

suzanne Peters Kapaa HI 96746 United States 2/3/17 I care.

Gail Neil Surrey BC V3W8J6 Canada 2/3/17 "I'm Native Indian, & when there is no water to drink because of people polluting the oceans, waters, & streams, EVERY ONE will suffer "

Hazel Silvester Harby ENG NG23 7EG United Kingdom 2/3/17 Please ban sunscreen + other products with oxybenzone in areas where it can adversely affect coral reefs (some of these are already struggling). Thank you

Davida Ecklund Charleston SC 29412 United States 2/3/17 Please sign...

Susan Forsyth Kihei HI 97853 United States 2/3/17 I scuba dive and can see the damage. Please ban sunsceens with harmful ingredients

souad choumane alger Algeria 2/3/17 ProtEge la nature

Joy Leilei Shih (Sierra Club Hawaii) Honolulu HI 96816 United States 2/3/17 I'm a coastal oceanographer and I see first hand the damage that is done to reefs. Oxybenzone is directly harmful to the health of coral by causing bleaching and disrupting its life cycle.

Mary Milham Waianae HI 96792 United States 2/4/17 "I'm pro-life! Don't let the corporate interests of sunscreen manufacturers TRUMP the life of our precious, vital, irreplaceable coral reefs! "

Marty Martins Kihei HI 96753 United States 2/4/17 I don't want the reefs to die!

Janice Clement-Putnam Puyallup WA 98371 United States 2/4/17 I lived in Hawaii for 50 years and am for anything that will help to preserve the ecosystem in our Hawaiian waters.

Vanessa Love Caldwell ID 83607 United States 2/4/17 All people that visit and or who live in Hawaii should be expected to contribute to Hawaii's preservation. In my opinion that preservation should be an expectation not an option.

Jayne Riley Lincoln ENG LN50SF United Kingdom 2/4/17 Please help to save the coral reefs and remove this chemical from sunscreen.

Maureen Bacon Kihei HI 96753 United States 2/5/17 Because it's the right thing to do!

Jo Murphy Corvallis OR 97330 United States 2/5/17 I love the islands and want to save the coral.

john ambrose calgary t1y 5z5 Canada 2/5/17 "Does Hawaiian Tropic use environmentally friendly ingredients? ...that wont damage our coral? If so and the others dont, that should be the only product sold in the islands till they do"

Karrie Kalich Keene NH 3431 United States 2/5/17 Your integrity please

rachel kattlove Hanalei HI Hanalei United States 2/5/17 The precious cove called Ke'e at the end of the road can't handle that much sunscreen in its waters everyday. We might as well help out.

Mary O'Neill Cambria CA 93428 United States 2/6/17 This needs to change

Christine Leddon Wichita KS 67217 United States 2/8/17 "I support the legislation that will ban sunscreen with oxybenzone. Not only are the coral reefs a beautiful natural resource (well worthy of being protected in and of themselves), the reefs also provide a lot of tourist dollars...and their loss will cause extensive damage to Hawaii's tourist industry."

Radhika Rishi Silver Spring MD 20902 United States 2/12/17 Hawaii is soon to be my home and I want the coral and Hawaii's environment to be protected.

Joseph Kohn MD Wailuku HI 97693-9762 United States 2/20/17 "CALL TODAY! DC industry lobbyists have influenced the Speaker to block the sunscreen bills from being heard!

Fred Boyd Scottsdale AZ 85257 United States 2/20/17 S T O P ENVIRONMENTAL IGNORANCE .

Sylvia Litchfield Kahului HI 96732 United States 2/24/17 We do already have the research! And there are other sunscreen options that are not toxic to coral, and all cosmetics companies carry these alternatives. There is no excuse not to save our precious coral reefs! Please listen to the scientists

Legislators are concerned that dermatologists won't have anything to recommend to their patients for sun protection. OXYBENZONE was the 2014 "Allergen of the Year" by the American Contact Dermatitis Society and that there are over 30 scientific papers showing how this chemical causing contact dermatitis in at least 10% of the U.S. population (that was a 1990s number).

(1) the evidence is strong that this chemical is polluting Hawaii's reefs - contaminating coral, fish, and most likely sea turtles and marine mammals

(2) Oxybenzone increases the sensitivity of corals to undergo bleaching, especially as it relates to climate change

(3) Oxybenzone can kill coral and other marine life, especially juveniles (The FDA requires that labeling of products containing oxybenzone should state "that it must not be used on children less than 6 months old).

(4) Oxybenzone can PREVENT the restoration of Hawaii's already devastated reefs from this last mass bleaching event

Every major cosmetic company (L'Oreal, Banana Boat, Coppertone, Avene, etc) has sunscreen and moisturizer product lines that do NOT contain oxybenzone. There would be no market loss for these companies; they just change out their product lines.

LeRoy Hatton Missoula MT 59802 United States 2/26/17 We need to do all we can to protect our planet.

Corinne Peace haiku HI 96708 United States 2/26/17 I know first hand the film from sunscreen and watching the coral die. It is important to be the best

stewards we can be. This is an easy one.

Ananda Stone Lahaina HI 96761 United States
2/26/17 "Coral reefs are crucial to Hawaii as they are home to 33% marine species, act as a buffer to protect our shorelines, and help our economy. If it is just a matter of switching to reef safe sunscreens why wouldn't we do that?"

Sarah Teehee Kailua-Kona HI 96740 United States
2/27/17 "Kealakekua Bay, Haunama Bay, and Molokini are some big draws for the snorkeling tourists, this bill is investing in our future."

Harry Prince Lahaina HI 96761 United States 2/27/17 It's
the Pono thing to do

Teri Heede Kapolei HI 96707 United States 2/28/17 This is a
common sense solution. Do it!

Mary Overbay Puunene HI 96784 United States
3/2/17 "The death of Maui's reefs is an environmental tragedy, and endangers one of Hawaii's most loved tourist attractions. It is so sad that the tourists that come here to enjoy the reefs, are unknowingly killing it. We must help our visitors to join in to save the reefs, by banning sunscreens that might damage our already endangered, and very fragile, reef ecosystems.

Tourists and residents want to do everything we possibly can do to help save our beautiful coral reefs and Hawaii's unique marine environments.

Please, support Sen. Will Espero's legislation for Hawaii, to ban sunscreen with oxybenzone beginning in 2018.

Mahalo!
"

Patricia Blair Hawaii AL 96734 United States
3/4/17 "Save our reefs, our coral!"

Mary Finelli Silver Spring MD 20904 United States
3/8/17 There are viable alternatives to using these harmful substances. There is no valid reason to allow them to pollute the water and destroy coral reefs.

Sarah Brandenstein Makawao HI 96768 United States 3/19/17 "I
have been advocating for reef harming sunscreen to be banned in Hawaii since I was eight years old. Now, as a college student on Maui I have studied the degradation of the reef and marine life. We must do every thing possible to save the marine life and our ecosystems! "

Julie Lowery Kihei HI 96753 United States 3/20/17
There is no reason for mankind to be using products that destroy oceanlife!

Anthony LaBua-Keiser Haiku HI 96708 United States 3/20/17
Simple enough!

Alana Dandrea Haiku HI 96708 United States
3/20/17 "Please do the right and easy thing by allowing this bill to go through. Our reefs are so important and if all we have to do is stop using this chemical sunscreen.. It's obvious, easy and the right thing to do. Please help our natural living reefs and stop the use of this harmful chemical sunscreen. "

Stacey Cushing Chico CA 95927 United States 3/20/17 I remember the coral in the '70's. The change is shocking. We need to do all we can.

Thomas Frauenhofer Pittsburgh PA 15220 United States 3/20/17 "Hawaii is a treasure, and our haphazard approach using chemicals is causing issues like this and others. I'm not against the use of chemicals, but if there is evidence of harm to the environment we should ban the dangerous chemicals and find safer alternatives."

Cynthia Ross Bogart GA 30622 United States 3/20/17 "The reefs are an integral part of the ecosystem. This applies to all reefs, not just the Hawaiian reefs. This should be worldwide."

H. Steven Coote Biggar s0k 0m0 Canada 3/20/17 It is so easy to fix!

Jeanna Allen Kula HI 96790 United States 3/20/17 I have seen the drastic decline in the health of the reef here. Snorkelling isn't that great any more. There's not much to see. We need to do something to save the reef.

Barb Barry Woodinville WA 98072 United States 3/20/17 We must all protect the Reefs of Hawaii!

Jane Magill Greenville SC 29615 United States 3/20/17 I care about our world's Coral Reefs .

kami carter Waimea HI 96743 United States 3/20/17 We need to protect our reefs now not later.

Paula Phillips Haiku HI 96708 United States 3/21/17 This is a very serious problem. More than 1/2 of the world's coral reefs have died. We need to protect what is left!

Sylvia Ching Honolulu HI 96813 United States 3/21/17 Save our reefs

Linda Norrington Los Alamitos CA 90720 United States 3/22/17 "Please act now. Board shirts and reef safe sunscreen are adequate and available - can be supplied on Molokini boats, etc."

Shannon Kylo Berthoud CO 80513 United States 3/22/17 "I'm signing this petition because I care about the coral reefs. Even in a land-locked state, I understand reefs provide more benefit than just beauty. Reefs are an important ecosystem that supports an abundance of diversity, all with far-reaching health and economic impact. Alternative sunscreens are already available that do not have these chemicals in their ingredients. There is simply no need to continue placing additional stress on this already fragile ecosystem."

Lauren Reutter Boulder CO 80301 United States 3/22/17 I care about our ecosystem.

To Honorable Representative Roy Takumi, Chair, CPC.
 Testimony in SUPPORT SB1150, SD2, HD2
 Hearing Date 3-30-17; Conference Room 329; 2PM

From Sylvia Litchfield
 Co-Chair, Green Party of Maui

sylvialitchfield@gmail.com
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Or Petition, in SUPPORT of SB1150, SD2, HD2

CORAL REEFS vs SUNSCREEN: A chemical called oxybenzone which is found in sunscreen and other personal care products is decimating coral reefs, making coral more susceptible to bleaching. More than 50 percent of coral off the West Hawaii coastline has bleached and possibly died this summer. Any small effort to reduce oxybenzone pollution could mean that a coral reef survives a long, hot summer, or that a degraded area recovers. While there are a lot of things we can't do anything about, this is one thing we can do right now for the environment.

To see our online petition with additional signatures and comments: <https://www.change.org/p/hawaii-state-legislators-take-action-to-protect-hawaii-s-dying-coral-reefs-ban-toxic-chemicals-in-sunscreen>

Name	City	State	Postal Code	Country	Signed On
Sylvia Litchfield 1/24/17	Kahului	Hawaii		United States	
garvin yuana 1/26/17	MAKAWAO	Hawaii	96768	United States	
Karen K. Cobeen 1/26/17	Kamuela	Hawaii	96743	United States	
Bill Quam 1/26/17	Honolulu	Hawaii	96822	United States	
Stacy Porteus 1/26/17	Kailua-Kona	Hawaii	96740	United States	
Valerie Wickert 1/26/17	Honolulu	Hawaii	96822	United States	
Leslie Geffen 1/26/17	Golden	Colorado	80401	United States	
eric feingold Jacqueline Farrell	Haiku	Hawaii	96708	United States	1/26/17 1/26/17
Eric Dilley 1/26/17	Ventura	California	93003	United States	
Erik Brush 1/26/17	Auburn	Alabama	36830	United States	
Esti Winter Mirella von Lindenfels 1/26/17	Rehovot Hurstpierpoint			Israel bn6 9ql	1/26/17 United Kingdom
TAPITA KAWAILANI 1/26/17	Newhall	California	91321	United States	
Kendall Johnson 1/26/17	Corpus Christi		Texas	78412	United States
Tasja Ebersole	Søborg		2860	Denmark	1/26/17

Lotte Handgaard Joergensen		Copenhagen			
Denmark 1/26/17					
Catrina Nesper		Kailua	Hawaii	96734	United States
1/26/17					
Linda Cherry		Spartanburg	South Carolina	29306	United States
1/26/17					
Jacob Peacock		Des Moines	Iowa	50317	United States
1/26/17					
Vija Sehgal		Kailua	Hawaii	96734	United States
1/26/17					
Elisa Favale	Trofarello		10028	Italy	1/26/17
Christina Comfort		Honolulu	Hawaii	96822	United States
1/26/17					
teressa beard		makawao	Hawaii	96768	United States
1/27/17					
Michael Smola		Kaaawa	Hawaii	96730	United States
1/27/17					
cathy knowlton		Haiku	Hawaii	96708	United States
1/27/17					
Erika Arnett					1/27/17
Ikue Ebersole		Valby			Denmark 1/27/17
Bayleaf Garden		Nottingham		NG5 3ES	United Kingdom
1/27/17					
Matthew Bredeson		Lahaina	Hawaii	96761	United States
1/28/17					
Alana Beckel		Kihei	Hawaii	96753	United States
1/28/17					
Lehua Kalawa'a		Kaneohe	Hawaii	96744	United States
1/29/17					
Kathy Marquez		Colorado Springs		Colorado	80909 United States
1/29/17					
Alex Beers		Wailuku	Hawaii	96793	United States
1/29/17					
Madison Wrobel					1/30/17
Darrian Alexis Raynor					1/30/17
Breanna Burns					1/31/17
Stanley Gurley					2/1/17
Jon Keto					2/1/17
Colton Avery		Auburn	California	95603	United States
2/2/17					
Yasmin Myers		Kapolei	Hawaii	96707	United States
2/2/17					
Sharon Willeford		keauhou	Hawaii	96739	United States
2/2/17					
kristen hunter		makawao	Hawaii	96768	United States
2/2/17					
Noelle Cullins		Haiku	Hawaii	96708	United States
2/2/17					
Poppy Hudson		Lahaina	Hawaii	96761	United States
2/2/17					
Mandy conger		Castle Rock	Colorado	80109	United States
2/2/17					
Timothy Smith		Oakland	California	94606	United States
2/2/17					
Dianne Blomquist		Princeville	Hawaii	96722	United States
2/2/17					
Priscilla Rodriguez		valencia	California	91354	United States
2/2/17					
Teralyn Siller		Arlington	Texas	76018	United States
2/2/17					

Dennis B Miller 2/2/17	honolulu	Hawaii	96815	United States
Gama Leong 2/2/17	Petaling Jaya		11060	Malaysia
yolanda schultes	Wittenbach		9300	Switzerland 2/2/17
Regine LOEUJL	Hamoir			Belgium 2/2/17
Rolf Mense 2/2/17	Puerto Lumbreras		30891	Spain
Silvia Steinbrecher			53881	Germany 2/2/17
Susana Muñoz	Madrid		28019	Spain 2/2/17
bos claudine	poligny		39800	France 2/2/17
Tineke Heutinck	Arnhem		6843	Netherlands 2/2/17
Helena Trojak	Kielce			Poland 2/2/17
Violetta Hartmann			15936	Germany 2/2/17
Andrea Knöpfler			30625	Germany 2/2/17
Gity Grupe		37643		Germany 2/2/17
Karina Utech			13349	Germany 2/2/17
An v. Brussel	R'veer		4941JT	Netherlands 2/2/17
cornelia Heppner			27572	Germany 2/2/17
christa lohrig			41352	Germany 2/2/17
Stadtmueller Petra	Erlensee		63526	Germany 2/2/17
Babs Sjoerdsma	Leeuwarden		8922EA	Netherlands 2/2/17
Rita Stämpfli	Kirchdorf		3116	Switzerland 2/2/17
dolores burke 2/2/17	castro valley	California	94552	United States
gro ottesen 2/2/17	stavanger	Nevada	309	United States
maggie joyce	Dublin			Ireland 2/2/17
Meike Heckel			49088	Germany 2/2/17
Sabine Julieka Danelon	555 22		2142	Australia 2/2/17
Susanne Lang	Köln		50939	Germany 2/2/17
Leslie Vanlessen	Lanaken		3620	Belgium 2/2/17
myriam vanden abbeelen Belgium 2/2/17		St Katelijne waver		
robert wiehemeijer 2/2/17	Drawsko Pomorskie		26844	Poland
James Cook	Seattle		Brazil	2/2/17
dolores paddock 2/2/17	cheshire	Connecticut	6410	United States
Mariska Catsman-Okkersen 2/2/17		Uithoorn	1423 PM	Netherlands
Sanand Dilip 2/2/17	Louvain-la-Neuve		400076	Belgium
Wendy Forster 2/2/17	Gateshead		NE11 0ET	United Kingdom
ursula angelika zintel			67581	Germany 2/2/17
Alexandr Yantselovskiy	Vyshneve		8132	Ukraine 2/2/17
Isis Riboldi Teixeira Alves Martins Cardoso Brazil 2/2/17			São Paulo	3683040
KATHY brunner 2/2/17	sheffield lake		Ohio	44054 United States
Paulo Oceans Santana 2/2/17	Mogi das Cruzes			Brazil
Edilma Ipiranga	Cotia		06700-220	Brazil 2/2/17
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Karin Zimmermann			91217	Germany 2/2/17
Athina Peter		22303	Germany	2/2/17

grouci djamila 2/2/17		nanteuil les meaux		77100	France
Chantal Buslot 2/2/17		Hasselt	Texas	78756	United States
Håkan Forsberg		Gnesta		Gnesta	Sweden 2/2/17
Manuel San Gabriel 2/2/17		Boston	Massachusetts	2118	United States
Melody Jacobsohn 2/2/17		Johannesburg		1448	South Africa
lyle stevens 2/2/17		Raleigh	North Carolina	27609	United States
Suzan Toma	Sittard		6137 PV	Netherlands	2/2/17
Dejan Gorcic		Nis			Serbia 2/2/17
Sandra wight		durban			South Africa 2/2/17
Paola Prado 2/2/17	La paz				"Bolivia, Plurinational State of"
SAKAGUCHI AKIKO 2/2/17		tokyo		1540002	Japan
AnnMarie Hodgson 2/2/17		"Barrie, Ontario"		L4N 2T8	Canada
kasturi saha			700014	India	2/2/17
Ted Williams Islands 2/2/17		Ralls		79357	United States Minor Outlying
Petra Hegenscheidt		Essen		45131	Germany 2/2/17
Beeke Engel		Kiel		24106	Germany 2/2/17
yo perre		beaucaire		30300	France 2/2/17
sylvia lobinger 2/2/17		austria	Alabama	1200 wien	United States
Wilma Lagrand		Goes		4451	Netherlands 2/2/17
Chardonnens Sonja		Mannens		1564	Switzerland 2/2/17
celine duburg anchen		montevideo			Uruguay 2/2/17
daniela plüschau				22280	Germany 2/2/17
Christelle McKie		Cuarnens			Switzerland 2/2/17
rosa blanckaerts		antwerpen		2040	Belgium 2/2/17
Frederic Nelcha		Saint-Prex			Switzerland 2/2/17
Anke O. Schaller				36433	Germany 2/2/17
Christine Thörnwall		Norrköping			Sweden 2/2/17
Bobbi Parsley 2/2/17		Atwood	Illinois	61913	United States
lesley williams 2/2/17		Redruth		tr151nf	United Kingdom
Niina Bejling	Stockholm			Sweden	2/2/17
Ronny De Coster		Ghent		9000	Belgium 2/2/17
Sarah Vuu 2/2/17		Espoo	Finland		Finland
JULIE JONES 2/2/17		liverpool		L334DR	United Kingdom
Megan Waters 2/2/17		Takoma Park		Maryland	20912 United States
christine Bouteloup				22340	France 2/2/17
Maria Mia Gloria Giacomelli 2/2/17		Ljubljana		4000	Slovenia
manuela wolter		st-cruiz		50309	Costa Rica 2/2/17
andrea maertzdorff		Rotterdam		30854	Netherlands 2/2/17
Rita Wolff		Hannover		30173	Germany 2/2/17
Jennifer Brandt 2/2/17		Avondale	Arizona	85323	United States
Roswitha Hanowski		Wedel		22880	Germany 2/2/17
MG Thiam			7820	Spain	2/2/17
Tiffany Torre	Honolulu	Hawaii	96816	United States	2/2/17

Maureen Belger 2/2/17	Hopkinton	Massachusetts	1748	United States
Julien Eberle			5500	France 2/2/17
kelly white	Kingston		K7K4N7	Canada 2/2/17
Lenka Říhová 2/2/17	CB			Czech Republic
Tineke Heutinck			1607	Netherlands 2/2/17
Chris Young	Dartmouth	B2V 2S1	Canada	2/2/17
Renchen N-e	Hamburg		22089	Germany 2/2/17
Nicolette Ludolphi	Bremen		28239	Germany 2/2/17
JoAnna D 2/2/17	"Yorktown,"	New York	10598	United States
mathieu papatie	val d'or		J9P-5L5	Canada 2/2/17
Margaret Martin-Wood	Victoria		V9C3Y7	Canada 2/2/17
Rudolf Mühl	Michelstadt		64720	Germany 2/2/17
pat hermans	Venlo	5915gp	Netherlands	2/2/17
Makishita Ayako			620931	Japan 2/2/17
candice tharp 2/2/17	wildwood	Florida	34785	United States
ximena suarez lopez 2/2/17	Gardena	California	90247	United States
Antoinette C. Gonzales 2/2/17	Victorville	California	92392	United States
kendra rainwater 2/2/17	douglssville	Georgia	30135	United States
Marga Star	Eindhoven		9471CV	Netherlands 2/2/17
Karen King	London		N6H 1T1	Canada 2/2/17
Austin Fryar 2/2/17	Pahoa	Hawaii	89072	United States
Claudia Bengs			90473	Germany 2/2/17
Barrie Hurst-Dreyer 2/2/17	Marietta	Georgia	30066	United States
Andreas Thiel	Munich		81545	Germany 2/2/17
Vilaypho Vong 2/2/17	Carthage	North Carolina	28374	United States
Marc van de Waarsenburg 2/2/17		Middelburg		zuidsingel59 Netherlands
Lisette de Waard	Lelystad	Flevoland	8226 LJ	Netherlands 2/2/17
H Mol 2/2/17	Poortvliet	Nebraska	4693EG	United States
Sigrid Müller		92278	Germany	2/2/17
Nichole Davis 2/2/17	Koloa	Hawaii	96756	United States
Jhyomo Tmg	L			Cyprus 2/2/17
Kathy Vorderbruggen 2/2/17	overland park		Kansas	66204 United States
lucy (its time to wake up) sn2 7tp	United Kingdom			Swindon 2/2/17
Pauline Scott 2/2/17	London	California	SW17OQQ	United States
susan devereaux 2/2/17	new castle	Delaware	19720	United States
Angela Fricke			37441	Germany 2/2/17
Claudia Wallies-Klose	Uetze		31311	Germany 2/2/17
josline gallagher	malta			Malta 2/2/17
Carole Korth	Hughenden		Tob2eo	Canada 2/2/17
lynn goodwin 2/2/17	lower sackville			B4C 1L1 Canada
tina michelakis	Hasselt			Belgium 2/2/17
Goran Jović	Izola			Slovenia 2/2/17

Esther Kemperle		Berg			Austria	2/2/17
Lisa Miller		Portsmouth		po64pn	United Kingdom	
2/2/17						
frieda lisens		merksem			Belgium	2/2/17
Elisabeth Bechmann		St. Pölten		3100	Austria	2/2/17
Sigrid Dr. Neef		37688 Beverungen			Buddha	Germany
2/2/17						
Ellen Gurtner		Mönchengladbach			41189	Germany
2/2/17						
Eva-Maria Haak		Salzgitter		67346	Germany	2/2/17
brigitte hoin		Aachen		52134	Germany	2/2/17
maren exel		basel			Switzerland	2/2/17
Rita Cauchi		Melbourne		3068	Australia	2/2/17
mary peteinaraki		heraklion city creta			71305	Greece
2/2/17						
Oliver Jordi		Kirchlindach/Bern			3038	Switzerland
2/2/17						
Silja Alter		Weßling		82234	Germany	2/2/17
Yan Ei Ra		Singapore			Singapore	2/2/17
Marion Schiffers		Brussels		4720	Belgium	2/2/17
Infinity Infinity		cholet		49300	France	2/2/17
Iveta Kubovicova		Povazska Bystrica			1701	Slovakia
2/2/17						
Lill Sunde		Bergen		5350	Norway	2/2/17
Laila Sunde	Odda	Nevada	5750		United States	2/2/17
Fernande Fournier		Luxembourg			Luxembourg	2/2/17
Lydia Zink		Hanover		30627	Germany	2/2/17
Sonia SONY				54470	Germany	2/2/17
Terri Gits		Conifer	Colorado	80433	United States	
2/2/17						
Peter Scott		Millcreek	Utah	84106	United States	
2/2/17						
Susanne Wischinski				26316 Varel	Germany	2/2/17
SILVESTRE BEATRICE		LIEGE		4000	Belgium	2/2/17
Heather Hall			2360!		Australia	2/2/17
Debbie Macmillan		Balloch		G83 8LX	United Kingdom	
2/3/17						
A.C. Davis		Thamesford		N0M 2M0	Canada	2/3/17
Marita Springer				10317	Germany	2/3/17
sau tsang		los angeles	California	91601	United States	
2/3/17						
Sofia Kalliolia		Corfu		14223	Greece	2/3/17
kathy stoddard		napanee		kr3l2	Canada	2/3/17
Gerlinde Holzer		Guntersdorf		2042	Austria	2/3/17
Susannah Gelbart		Las Vegas	Nevada	89149	United States	
2/3/17						
Gisela Gama				47002	Portugal	2/3/17
Alexis Azcárate				62767	Mexico	2/3/17
Gabriela Baldaia		Porto		42003	Portugal	2/3/17
Maria Guedes				43002	Portugal	2/3/17
Tereza Cristina Marins		São Paulo		3589	Brazil	2/3/17
Janine Vinton		Hastings		3915	Australia	2/3/17
Suzanne O'Meara		Keaau	Hawaii	96749	United States	
2/3/17						
Kate Danum	Copenhagen				Denmark	2/3/17
jocelyne lapointe		Terrebonne	California	j6w0b5	United States	
2/3/17						
Petra Jones	Sydney		2204	Australia	2/3/17	
Ray Uriarte		Murrieta	California	92536	United States	
2/3/17						

Maria Alice Rocha 70744030 Brazil 2/3/17	simao almeida			brasilia	
Lucy Pérez 2/3/17	Chilpancingo Guerrero			39000	Mexico
Nan Newall 2/3/17	Brightsgrove			N0N 1C0	Canada
Inge Stadler Margaret Bonn 2/3/17	Buffalo	91161 New York	Germany 14226	2/3/17 United States	
Pasha Yushin 2/3/17	Honolulu	Hawaii	96815	United States	
佐々木 渚 Katherine Wimmer 2/3/17	Rock Hill	004—0801 South Carolina	Japan 29730	2/3/17 United States	
Jasmin Castens sofie STEPKOWSKI	Salmon Arm		22147 v1e3m7	Germany Canada	2/3/17 2/3/17
Judy Rees Elaine Jung 2/3/17	Adelaide New Westminster		5052	Australia V3M 6R4	2/3/17 Canada
Elaine Al Meqdad 2/3/17	Willowbrook	Illinois	60527	United States	
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Mari Dominguez 2/3/17	Linden	California	95236	United States	
fiona curran Chiarita Tarrow Gayle O'Donnell 2/3/17	Chatain Roma Koloa		61700 128 96756	France Italy United States	2/3/17 2/3/17
Rebecca Gorsline 2/3/17	Kapaa	Hawaii	96746	United States	
Akemi fukuyoshi Cynthia Franke Sandra Lenz Flonny Tante Janina Grage Leonella Leoni Susan Mitnik 2/3/17	hong kong Kassel Kassel lanaken		kowloon 34127 34131	Hong Kong Germany Germany Belgium	2/3/17 2/3/17 2/3/17 2/3/17
Janina Grage Leonella Leoni Susan Mitnik 2/3/17	Kapaa	Hawaii	44649 6125 96755	Germany Italy United States	2/3/17 2/3/17
carolyn barnes 2/3/17	greene	New York	13778	United States	
Tania Orechowski 2/3/17	Sao Paulo		Brasil	Sao P	Brazil
yoshino trudie 2/3/17	Ota-ku		1 4 5 – 0 0 6 5		Japan
Marianne Beames Claudia Tuechler 2/3/17	8082 Kirchbach		29640	Spain	2/3/17 Austria
Dalibor Gajda 2/3/17	Ostrava			Czech Republic	
Matt Gallop gina de minelli gina de minelli				2/3/17 41000. blois	France

2/3/17	Katarzyna Jasińska		Legnica		59-200	Poland	2/3/17
	Davinia Hernández Gómez					38730	Spain
2/3/17	deborah ullrich		berwyn	Illinois	60402		United States
2/3/17	martine cuisenaire		Heer		5543	Belgium	2/3/17
	chris usami		toronto		m9w2v9	Canada	2/3/17
	Irmchen Wagner				72474	Germany	2/3/17
	Randy Prescott		Ferndale	Washington	98248		United States
2/3/17	Dennis Dougherty		San Rafael	California	94903		United States
2/3/17	catherine cheneval		LYON		73000	France	2/3/17
	joyce alexander		edinburgh		eh15 1le		United Kingdom
2/3/17	BONDONI Véronique		sigean	Florida	arretez le		United States
2/3/17	Magda Komorowska		Mississauga		L5E3N5	Canada	2/3/17
	Lisa Brown		Houston	Texas	77057		United States
2/3/17	Craig Domin	Houston	Texas	77059		United States	2/3/17
	Katie Woolcott		London		Sw19 8ht		United Kingdom
2/3/17	Diane Dickinson		Neptune City		New Jersey 7753		United States
2/3/17	Terrie Phenicie		Athelstane	Wisconsin	54104		United States
2/3/17	valerie bocourt				2100	France	2/3/17
	Eve Maquin			77330		France	2/3/17
	castellani isabelle		livry gargan		93190	France	2/3/17
	Claudine MAMMERI		LAUDUN		30290	France	2/3/17
	Marina Kotelnikova		Moscow		121359		Russian Federation
2/3/17	nathalie dubuy		Sannois		95110	France	2/3/17
	Virginie Mondon		Saint-Quentin		2100		France
2/3/17	Claudia Neuhalfen				53117	Germany	2/3/17
	donna wade	Calais	Maine	4619		United States	2/3/17
	Jacqueline Cohn		Myrtle Beach			South Carolina	29579
	United States	2/3/17					
	suzanne Peters		Kapaa	Hawaii	96746		United States
2/3/17	rita nehme		beirut		#NAME?	Lebanon	2/3/17
	isabelle obscur		toulon		83000	France	2/3/17
	Dennis Kreiner		Carpentersville		Illinois 60110		United States
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2/3/17	Celeste Costa		Old Westbury		New York 11501		United States
2/3/17	Gail Neil		Surrey BC		V3W8J6	Canada	2/3/17
	Petra Jakubzik		Grevenbroich		41515		Germany
2/3/17	wendy leys		antwerpen		2223	Belgium	2/3/17
	Gabriela Seabra				3780	Portugal	2/3/17
	Hazel Silvester		Harby		NG23 7EG		United Kingdom
2/3/17	GUEDJ SANDRINE				91270	France	2/3/17
	Lucie boiteau				53000	France	2/3/17

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Jan Gielkens		6005RV	Netherlands 2/3/17
Lise Vandal	Alma	G8B 5V3	Canada 2/3/17
Sudeshna Ghosh	Calcutta	700023	India 2/3/17
FRANCO FORTE Republic of" 2/3/17	Caracas	1040	"Venezuela, Bolivarian
Irène Garin-Davet		74440	France 2/3/17
carol devarieux	paris	75012	France 2/3/17
Janet Hoffmann 2/3/17	Merseyside	CH47 9RZ	United Kingdom
fabienne cronenberger 2/3/17	Burnhaupt le bas		68520 France
VALERIE RAYNAUD 2/3/17	SAINTE-SUZANNE		97441 France
Angelika Klebs		70378	Germany 2/3/17
Susan Forsyth 2/3/17	Kihei Hawaii	97853	United States
souad choumane	alger		Algeria 2/3/17
Joy Leilei Shih (Sierra Club Hawaii) 2/3/17	Honolulu Hawaii	Hawaii	96816 United States
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Jenny Lindstrom 2/4/17	Bonney Lake	Washington	98391 United States
Allison Smith 2/4/17	Makawao Hawaii	96768	United States
Mary Milham 2/4/17	Waianae Hawaii	96792	United States
Nicole Brown 2/4/17	Kula Hawaii	96790	United States
Ellen G 2/4/17	Sussex Wisconsin	53089	United States
diana lupart		95270	France 2/4/17
Marty Martins 2/4/17	Kihei Hawaii	96753	United States
Janice Clement-Putnam 2/4/17	Puyallup Washington	98371	United States
derrick chesterton 2/4/17	naalehu Hawaii	96772	United States
Gabrielle Chalmin		63260	France 2/4/17
Carrie Templeton 2/4/17	Lafayette Colorado	80026	United States
cecilie siegel 2/4/17	concord California	94520	United States
Danielle L'Ecuyer	Ottawa	K1N1C4	Canada 2/4/17
Mariana Lukáčová 2/4/17	Moldava nad Bodvou		Slovakia
susan siegel	kealakekua Hawaii	96750	United States 2/4/17
Marie Mary		91390	France 2/4/17
Mihai Beagu	Bucuresti		Romania 2/4/17

Jasmine Cerfontaine		Sambreville			Belgium	2/4/17
Elizabeth Bishop		Honolulu	Hawaii	96825	United States	
2/4/17						
NOITON Willy		Ceyzériat		1250	France	2/4/17
Valerie Curtis		Orono	Maine	4473	United States	
2/4/17						
maria isabel			48080	Spain		2/4/17
Nadia KUGELOV		St Brieuc		22000	France	2/4/17
Stephanie Strong		Kihei	Hawaii	96753	United States	
2/4/17						
Andy Benik		North Hollywood		California	91601	United States
2/4/17						
Sylvia Gries		Eppenbrunn		66957	Germany	2/4/17
marielaure vignaud				16200	France	2/4/17
Kathy Efthymiakopoulos		Longueuil		j4k5g7	Canada	2/4/17
Chantal Blot	Ygos-Saint-Saturnin			40110	France	2/4/17
wendy smith	nelson		bb98tt		United Kingdom	2/4/17
Floriane M			78000	France		2/4/17
Jeffrey Zollman		Saint Paul	Minnesota	55113	United States	
2/4/17						
Roderick Hall		Temecula	California	92591	United States	
2/4/17						
Jeannine Johnson		Honolulu	Hawaii	96821	United States	
2/4/17						
Anna Luneau		liège			Belgium	2/4/17
Maria Tüchler		8082 Kirchbach			Austria	
2/4/17						
cristina fernandez		Tandil		7000	Argentina	2/4/17
Rebecca Hall		Cambs	South Carolina		PE16 6NN	United States
2/4/17						
Vanessa Love		Caldwell	Idaho	83607	United States	
2/4/17						
Zhu Zhu Xiao		Seattle	Washington	98105	United States	
2/4/17						
Karin Guenther				27474	Germany	2/4/17
peter christiansen		odense nqww			Denmark	
2/4/17						
Corryn Gow	I			South Africa		2/4/17
Jayne Riley		Lincoln		LN50SF	United Kingdom	
2/4/17						
Jordan Felt		Hilo	Hawaii	96720	United States	
2/5/17						
dana jenkins						2/5/17
Hannah Dresang		Fort Collins	Colorado	80526	United States	
2/5/17						
Danny Chan	LaSalle		H8N 2T6	Canada		2/5/17
Maureen Bacon		Kihei	Hawaii	96753	United States	
2/5/17						
Jo Murphy		Corvallis	Oregon	97330	United States	
2/5/17						
john ambrose		calgary		t1y 5z5	Canada	2/5/17
Staniclav Aksyonov		Тюмень			Russian Federation	
2/5/17						
Elisa Leflore	El Dorado	Arkansas	71730	United States		2/5/17
adele urbanek		M?dling			Austria	2/5/17
jean hodges	Farmington Hills	Michigan		48335	United States	
2/5/17						
John Guthrie		"Bristol,"		BS37 4DH.	United Kingdom	
2/5/17						
ANNA STICCA		Brescia		46043	Italy	2/5/17

Gero Wölfel 2/5/17	Ichtershausen		99334	Germany
Karrie Kalich 2/5/17	Keene	New Hampshire	3431	United States
Anselmo Escobedo 2/5/17	Colton	California	92324	United States
Dagmar Grabsch	Berlin		13627	Germany 2/5/17
Jessica Taylor				2/5/17
Rachel Kattlove 2/5/17	Hanalei	Hawaii	Hanalei	United States
Sabine Mayr	Innsbruck		6020	Austria 2/5/17
Danuta Watola	Kalety		42-660	Poland 2/5/17
Ulrica Sjögren	Sweden			Sweden 2/5/17
Raphiell Nolin 2/5/17	Puunene	Hawaii	96784	United States
N. Marciel 2/6/17	Campbell	California	95008	United States
Mary O'Neill 2/6/17	Cambria	California	93428	United States
Paul Carter 2/6/17	Paia	Hawaii	96779	United States
judielyn Iloren	bislig			Philippines 2/6/17
Natalie Van Leekwijck	Deurne		2100	Belgium 2/6/17
jasper sierra	Laytonville	California	95454	United States 2/6/17
Evelyn Ampolos 2/6/17	Kahului	Hawaii	96732	United States
Madeleine Gläser			92536	Germany 2/6/17
Maria Schulz	Timisoara		300424	Romania 2/6/17
Tulsi Greenlee 2/7/17	Haiku	Hawaii	96708	United States
Paul Ross 2/7/17	San Antonio	Texas	78247	United States
Douglas Sheehan 2/7/17	San Carlos	California	94070	United States
CHRISTINE LEDDON 2/8/17	Wichita	Kansas	67217	United States
Catherine Clemmens 2/9/17	Dayton	Ohio	45419	United States
James Flanagan 2/9/17	Greenville	Rhode Island	2828	United States
Andrew Frost				2/9/17
Jakub Coltun				2/11/17
Radhika Rishi 2/12/17	Silver Spring		Maryland 20902	United States
Deb Lill 2/13/17	Appleton	Wisconsin	54911	United States
desanka sandulovic	belgrade		11000	Serbia 2/13/17
pino m.	bgd		11000	Serbia 2/13/17
Marco Baracca	Milano		20142	Italy 2/17/17
Elle Lang 2/18/17	St. Louis	Missouri	63119	United States
Dan Hassler				2/19/17
Lisa Salazar	Shasta Lake	California	96089	United States 2/19/17
NIKHILANANDA n 2/20/17	"MAKAWAO MAUI,"		Hawaii 96768-1704	United States
Joseph Kohn MD 2/20/17	Wailuku	Hawaii	97693-9762	United States
Fred Boyd 2/20/17	Scottsdale	Arizona	85257	United States

LJ Bates III 2/24/17	Mountain View	Hawaii	96771	United States
Barryn Chun 2/25/17	Kaneohe	Hawaii	96744	United States
Glorianne Garza 2/25/17	Volcano	Hawaii	96785	United States
Edgar Espero 2/25/17	Ewa Beach	Hawaii	96706	United States
Kyle Pritchard 2/25/17	Denver	Colorado	80219	United States
Patricia Blair 2/25/17	Hawaii	Alabama	96734	United States
ryan christopher 2/25/17	scottsdale	Arizona	85260	United States
Shannon Rudolph 2/25/17	Holualoa	Hawaii	96725	United States
Myra Nickla 2/25/17	Little Rock	Arkansas	72207	United States
LeRoy Hatton 2/26/17	Missoula	Montana	59802	United States
REAH High 2/26/17	Shingle springs	California	95682	United States
Sue Corey 2/26/17	Chico	California	95926	United States
Diane Koerner 2/26/17	Pahoa	Hawaii	96778	United States
Amanda Hennessy 2/26/17	Crescent City	California	95531	United States
Corinne Peace 2/26/17	haiku	Hawaii	96708	United States
Divona Leitner Maggie Belsan 2/26/17	Vancouver fairfax	Virginia	V5X 4N5 22030	Canada United States
Ananda Stone 2/26/17	Lahaina	Hawaii	96761	United States
christian laney-clark 2/26/17	oroville	California	95966	United States
Sarah Teehee 2/27/17	Kailua-Kona	Hawaii	96740	United States
Harry Prince Carri Stearns 2/28/17	Lahaina	Hawaii	96761 96768	United States United States
Teri Heede 2/28/17	Kapolei	Hawaii	96707	United States
Nedi McKnight 2/28/17	Paauilo	Hawaii	96776	United States
Renee Miller 3/1/17	Makawao	Hawaii	96768	United States
Alice Axe 3/1/17	Toms River	New Jersey	8753	United States
Mary Overbay 3/2/17	Puunene	Hawaii	96784	United States
Pamela Waiolena 3/3/17	Waikoloa	Hawaii	96738	United States
Stephen Newman 3/6/17	Haleiwa	Hawaii	96712	United States
Omar Scott Antar 3/6/17	Moosup	Connecticut	6354	United States
robyn couturier 3/6/17	swansea	Massachusetts	2777	United States

Patricia Nardone 3/6/17	Union	New Jersey	7083	United States
Chris Scholl 3/6/17	Neptune	New Jersey	7753	United States
kathy smith 3/6/17	Trumann	Arkansas	72472	United States
Asawari Ghude 3/6/17	Short hills	New Jersey	7078	United States
Guloim Zhapbarbergenova United States 3/6/17		Bloomfield Hills		Michigan 48302
Ilean Brown	Elliot Lake		P5A 1S2	Canada 3/6/17
Teressa Tremaglio 3/6/17	Boynton Beach		Florida	33435 United States
steve phenicie 3/6/17	silvercliff	Wisconsin	54104	United States
Emanuel Falcone 3/7/17	Fort Myers	Florida	33908	United States
Maura Ivan	Hamilton		L0R1C0	Canada 3/7/17
Cathy Thomas 3/8/17	Richmond	Virginia	23225	United States
Mary Finelli 3/8/17	Silver Spring		Maryland	20904 United States
Caroline Struck	Osnabrück		49086	Germany 3/9/17
elizabeth rose 3/9/17	zanesville	Ohio	43701	United States
Julie Martin 3/9/17	Frederic	Wisconsin	54837-8918	United States
Kelleen Knight 3/10/17	Summerland		California	93067 United States
Eliette Bozzola	Muël		35290	France 3/10/17
sarah compratt 3/10/17	champaign	Illinois	61820	United States
Maryam Kamali 3/10/17	Belmont	California	94002	United States
Sophie Marcella	Victoria		V8V4L4	Canada 3/10/17
Mark Lazeration 3/10/17	Grand Island		New York	14072 United States
Louie Adams 3/10/17	London		N8 8hu	United Kingdom
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Daniela Oliveira 3/11/17	Quilmes- Buenos Aires		1871	Argentina
Karen McCombs 3/11/17	Garner	North Carolina		27529 United States
CHARMAINE HAMANN 3/19/17	GAITHERSBURG		Maryland	20878 United States
Stephanie Tolla 3/19/17	san francisco		California	94109 United States
Suzanne Post 3/19/17	Franklin	North Carolina		28734 United States
Erica Kolhoff 3/19/17	Garrettsville	Ohio	44231	United States
RedElisa Mendoza 3/19/17	No. Miami	Florida	33161	United States
Jennifer Fogarty	Campbell Hall		New York	10916 United States

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Sarah Brandenstein		Makawao	Hawaii	96768	United States	
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Keenan Cheney		Waianae	Hawaii	96792	United States	
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Sarah Butler	Kalamazoo	Michigan	49008	United States		3/20/17
Larry Coltrane		Honolulu	Hawaii	96822	United States	
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Julie Lowery	Kihei	Hawaii	96753	United States		3/20/17
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Anthony LaBua-Keiser		Haiku	Hawaii	96708	United States	
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Patrick F		Wailuku	Hawaii	96793	United States	
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Leslie VanBerg		Wahiawa	Hawaii	96786	United States	
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Donna Shafer		Moore	Oklahoma	73170-1475	United States	
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Stacey Cushing		Chico	California	95927	United States	
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Karen Kriegermeier		Kihei	Hawaii	96753	United States	
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Tanya Aynessazian		Pahoa	Hawaii	96778	United States	
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Anna James	Humble	Texas	77346	United States		3/20/17

Thomas Frauenhofer 3/20/17	Pittsburgh	Pennsylvania	15220	United States
Cynthia Ross 3/20/17	Bogart	Georgia	30622	United States
H. Steven Coote	Biggar		s0k 0m0	Canada 3/20/17
T. Kazume Martin 3/20/17	Pahoa	Hawaii	96778	United States
ONLY ONE MAUI 3/20/17	KIHEI	Hawaii	96753	United States
Jeanna Allen 3/20/17	Kula	Hawaii	96790	United States
Barb Barry 3/20/17	Woodinville	Washington	98072	United States
Mark Joiner 3/20/17	Kihei	Hawaii	96753	United States
Nikole Milliron 3/20/17	Kihei	Hawaii	96753	United States
annette davidsson 3/20/17	haiku	Hawaii	96708	United States
Heather Dando 3/20/17	Salem	Oregon	97306	United States
Shelley Green 3/20/17	Gaithersburg	Maryland	20878	United States
Kapono Makahanaloa-antunez 3/20/17		Haiku	Hawaii	96708 United States
Bianca Pauleti	HAARLEM		46006	Spain 3/20/17
Tricia Savitt 3/20/17	Studio City	California	91604	United States
Karen Gibson 3/20/17	Mount Vernon		New York	10552 United States
Jane Magill 3/20/17	Greenville	South Carolina	29615	United States
Amy Langman 3/20/17	Hana	Hawaii	96713	United States
Elizabeth Sullivan 3/20/17	Waimea	Hawaii	96743	United States
Justin McCollum 3/20/17	Santa Cruz	California	95062	United States
Abe Galan 3/20/17	Lahaina	Hawaii	96761	United States
Lynn Kopycienski 3/21/17	Kula	Hawaii	96790	United States
Jesse Miles 3/21/17	Pāhoa	Hawaii	96778	United States
Daniel Kopycienski 3/21/17	Kula	Hawaii	96790	United States
Barb Craig 3/21/17	Evans	New York	14047	United States
Angela Worth 3/21/17	kapolei	Hawaii	96707	United States
Paula McCurry 3/21/17	Athens	Georgia	30605	United States
Sara Mason	Kula	Hawaii	96790	United States 3/21/17
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Haunani Bray 3/21/17	Las Vegas	Nevada	89139	United States
Paul Solomon 3/21/17	Haiku	Hawaii	96708	United States
Irene Ryding	Haiku	Hawaii	96708	United States

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Pearl Patterson		Haiku	Hawaii	96708	United States	
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Sylvia Ching	Honolulu	Hawaii	96813	United States		3/21/17
Mavis Oliveira-Medeiros	Hana	Hawaii	96713	United States		3/21/17
Forest Shomer		Port Townsend		Washington 98368	United States	
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Kat Culina		Pahoa village		Hawaii	96778	United States
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Teresa Lopez		Elk Grove	California	95624	United States	
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Erica Hill						3/22/17
Linda Norrington		Los Alamitos		California	90720	United States
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Shannon Kylo		Berthoud	Colorado	80513	United States	
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Bryon Sparks		Wailuku	Hawaii	96793	United States	
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Lauren Reutter		Boulder	Colorado	80301	United States	
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Vicki Schendel		Carvel		T0E 0H0	Canada	3/22/17
Ashley Blizz		Denver	Colorado	80227	United States	
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Annie Young		Boulder	Colorado	80303	United States	
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lucero olson	Riverside	California	92506	United States		3/23/17
Rhio Coreli		New York	New York	10027	United States	
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Jenna Miles		Dartmouth		B2V 2K2	Canada	3/23/17
Cory Missimore						3/23/17
Katherine Morris		Napa	California	94558	United States	
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Nova Covington		Longmont	Colorado	80503	United States	
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Jaspreet Chatta		Pittsburgh	Pennsylvania		15206	United States
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Mike Keating		Honolulu	Hawaii	96815	United States	
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susan fontanes		New Hyde Park		New York	11040	United States
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Debra K Gregory		Hilo	Hawaii	96720	United States	
3/24/17						
Cynthia Harbert		Evergreen	Colorado	80437	United States	
3/25/17						
Sameer Kadhikhaye						3/26/17
kim washick						3/26/17
Timothy Graham						3/26/17
Craig Downs		clifford	Virginia	clifford	United States	
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Sunscreen and Coral

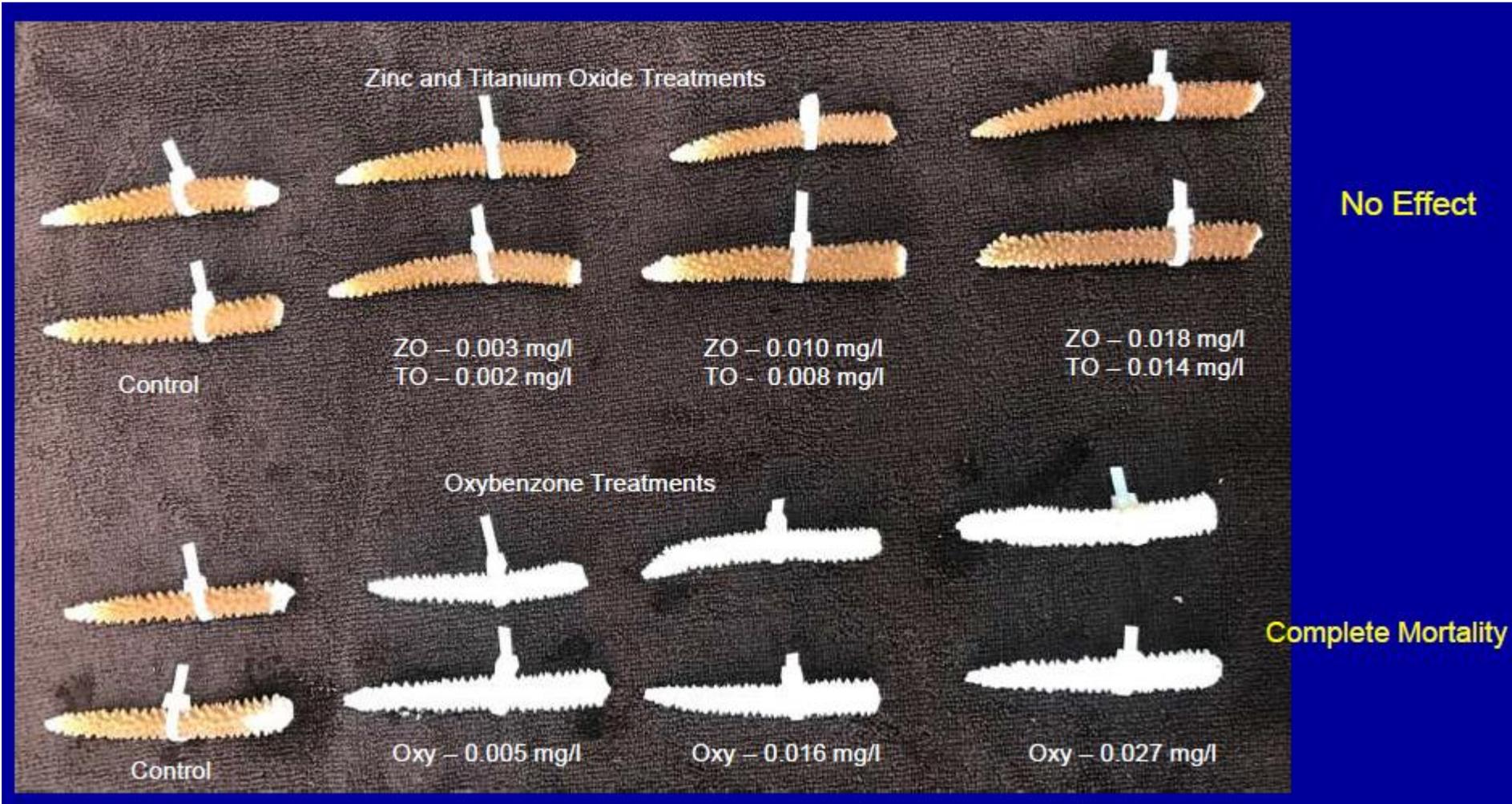


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February 2017

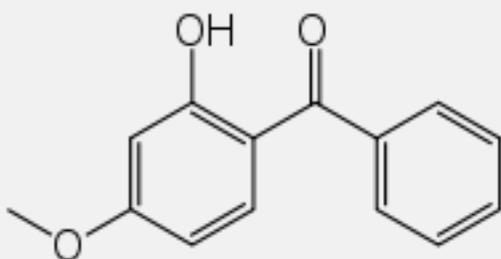
To Honorable Representative Roy Takumi, Chair, CPC.

Testimony in SUPPORT SB1150, SD2, HD2

Hearing Date 3-30-17; Conference Room 329; 2PM

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Oxybenzone



(Chemical Abstract Service Registry Number 131-57-7; IUPAC Name (2-hydroxy-4-methoxyphenyl)-phenylmethanone; Benzophenone-3, Milestab 9, Escalol 567, Eusolex 4360)

Oxybenzone Contamination in the Environment and the

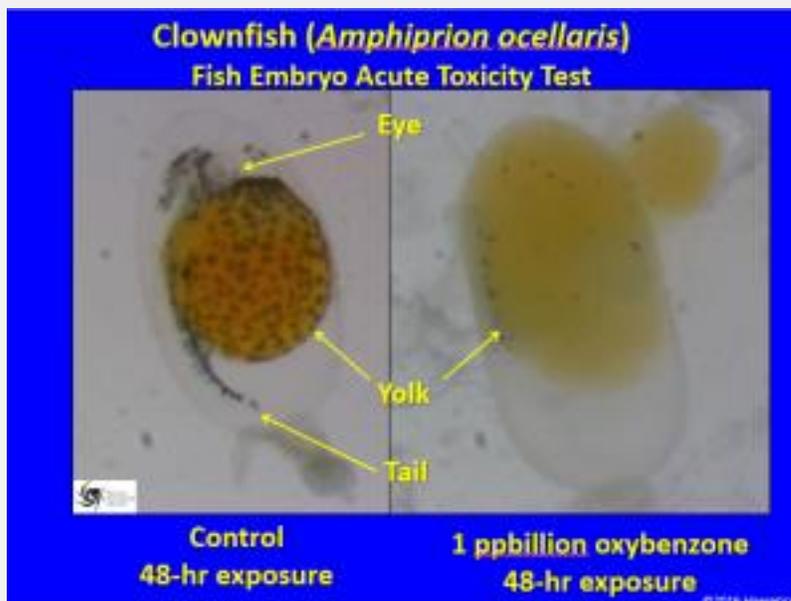
Public

Oxybenzone is a ubiquitous environmental contaminant – it is found in streams, rivers, lakes, and in marine environments from the Arctic Circle (Barrow, Alaska) to the beaches and coral reefs along the equator [1][2][3][4]. It is considered an environmental hazard in many locations[5]. It is found in very high

concentrations in swimming pools and hot tubs[6], and even in our drinking water (municipal treated and desalinated sources)[7][8]. Swimmers directly contaminate water sources, but point and non-point sewage and treated waste-water effluent discharges are the largest source of contamination.

Oxybenzone can be absorbed directly through the skin, either from application of sunscreen product onto the skin, or by absorption from swimming in either swimming pools or along beaches[9][10][11]. Oxybenzone in a commercial sunscreen formulation can transfer from the lotion or spray into the body, and be detected in urine within 30 minutes to several hours of application[12][13]. Oxybenzone body-contamination is widely prevalent in the general human population, with some nationalities having higher levels than others[14]. One study found that 96.8% of participants' urine was contaminated with oxybenzone, indicating the almost-universal prevalence of exposure in the human population[15][16]. Oxybenzone can contaminate semen[17], placenta and breastmilk of marine mammals and humans[18][19][20][21]. Oxybenzone can both bioaccumulate, and can be biomagnified[22]. Oxybenzone has been found in bird eggs, fish, coral, humans, and other marine mammals[23][24].

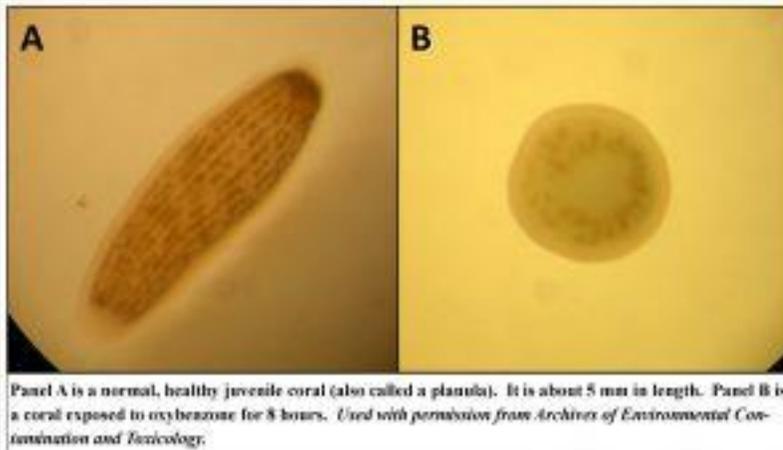
Oxybenzone Ecotoxicology



Oxybenzone and many of its metabolites are documented mutagens, especially when exposed to

sunlight[25]·[26]·[27]·[28]·[29]. They can cause genotoxicity either from induction of photo-oxidative stress or adduction to DNA directly through bio-activation by cytochrome P450 enzymes[30]·[31]·[32]. Oxybenzone and other benzophenones can induce pro-carcinogenic activities by inducing cell proliferation in cancer cells lines that are receptive to estrogenic compounds[33]·[34]·[35]. Recent studies have also documented that oxybenzone increases metastasis potential (cellular proliferation) via a non-estrogenic mechanism[36].

Oxybenzone is a photo-toxicant, especially in the presence of ultraviolet light⁴. This means that the greater the light intensity, especially in the UV and near-UV spectrum, new forms of toxicity manifest, and usually in a dose-dependent manner of both oxybenzone and light.



In mammals, especially humans, oxybenzone has been shown to induce photo-allergic contact dermatitis in 16%-25% of the population[37]·[38]·[39]. Oxybenzone causes toxicity to sperm development and sperm viability, reduced prostate weight in mature males, and reduced uterine weight in juvenile females[40]·[41]. In rodents, it reduced fecundity and induced idiopathic sudden death in lactating mothers[42]. Several recent studies have shown a strong association between urinary and seminal oxybenzone concentrations and increased reproductive diseases and reduced fecundity[43]·[44]. There is a building body of evidence of the estrogenic and anti-androgenic endocrine disrupting mechanisms of oxybenzone in mammals[45]·[46]. One study indicated an increased occurrence of endometriosis in women exposed to concentrations of oxybenzone, while another study showed a positive association with uterine leiomyoma[47]·[48]. Oxybenzone has also been associated with altered timing of breast development in girls[49].

Oxybenzone is a notorious estrogenic endocrine disruptor, causing male fish to become feminized and inducing egg protein production in males and juveniles[\[50\]](#)[\[51\]](#)[\[52\]](#). Oxybenzone causes a reduction in the number of eggs a female fish will produce[\[53\]](#)[\[54\]](#)[\[55\]](#). In fish, oxybenzone is metabolized into benzophenone-1, a much more potent estrogenic disruptor[\[56\]](#). Oxybenzone will also cause radical behavioral changes in fish, causing them to lose “territorial” behavior[\[57\]](#).

Oxybenzone can have devastating effects on invertebrates, especially on juvenile developmental stages⁴. In coral, it can cause coral bleaching, DNA damage, planula deformity, mortality, and skeletal endocrine disruption⁴. For coral planula, gross toxicological effects were seen as low as 6.5 ppbillion in a 24-hour period, and cellular effects were seen as low as 72 pptillion in a 4-hour period. In bivalves, growth inhibition occurred around 2-3 ppmillion[\[58\]](#). In shrimp larvae, growth inhibition was seen around 421 ppbillion[\[49\]](#).

Oxybenzone is even toxic to microalgae, such as *Isochrysis galbana*, at levels comparable to coral, such as 4 ppbillion[\[49\]](#).

Oxybenzone is also associated with several human diseases, especially of fetal-development diseases associated with prenatal exposure to oxybenzone[\[59\]](#)[\[60\]](#). Hirschsprung’s disease, a development abnormality thought to afflict every 1 in 2,000 births, has been linked to maternal exposure to oxybenzone, by interfering with the migration neural crest cells during embryonic development[\[61\]](#).

Emerging Science regarding Oxybenzone: a human-health warning.

Oxybenzone can contaminate hot-tubs and swimming pools with concentrations in the parts per billion⁵. If these pools use chlorine or bromine as a disinfectant, the oxybenzone undergoes a chemical reaction and can become “chlorinated” or “brominated – meaning a chlorine or bromine is conjugated to the oxybenzone, changing its chemical structure and chemistry[\[62\]](#)[\[63\]](#). Very recent

studies show that the chlorinated forms of oxybenzone are *significantly more toxic* than normal oxybenzone, acting as significant DNA damage agents[57]:[58]:[64]. A by-product of this oxybenzone chlorination is chloroform[65].

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We've come up with a list of chemicals and attributes in personal care products (e.g., sunscreen lotions and sprays) that are found in a number of different aquatic and marine ecosystems that can have a detrimental effect on their existence. We call this list of chemicals and physical-attributes the "HEL LIST." [See the list here](#)
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Ban on Many Sunscreen Products Likely to Pass in Hawaii Senate

March 3, 2017

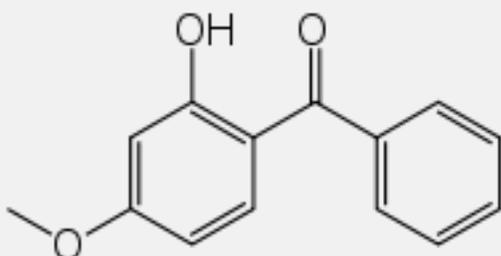


Legislative Ban of Oxybenzone in Hawaii – Media Coverage

February 3, 2017

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Oxybenzone



(Chemical Abstract Service Registry Number 131-57-7; IUPAC Name (2-hydroxy-4-methoxyphenyl)-phenylmethanone; Benzophenone-3, Milestab 9, Escalol 567, Eusolex 4360)

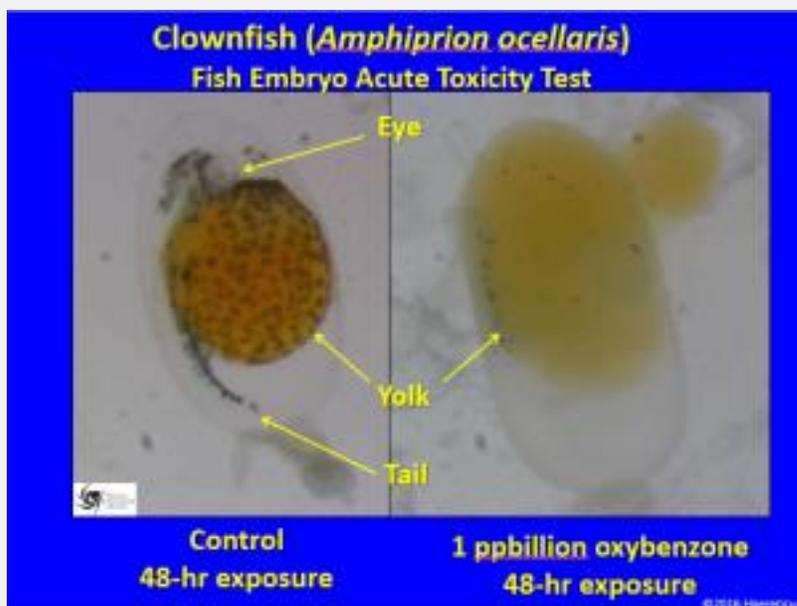
Oxybenzone Contamination in the Environment and the Public

Oxybenzone is a ubiquitous environmental contaminant – it is found in streams, rivers, lakes, and in marine environments from the Arctic Circle (Barrow, Alaska) to the beaches and coral reefs along the equator [\[1\]](#)[\[2\]](#)[\[3\]](#)[\[4\]](#). It is considered an environmental hazard in many locations[\[5\]](#). It is found in very high concentrations in swimming pools and hot tubs[\[6\]](#), and even in our drinking water (municipal treated and desalinated sources)[\[7\]](#)[\[8\]](#). Swimmers directly contaminate water sources, but point and non-point sewage and treated waste-water effluent discharges are the largest source of contamination.

Oxybenzone can be absorbed directly through the skin, either from application of sunscreen product onto the skin, or by absorption from swimming in either

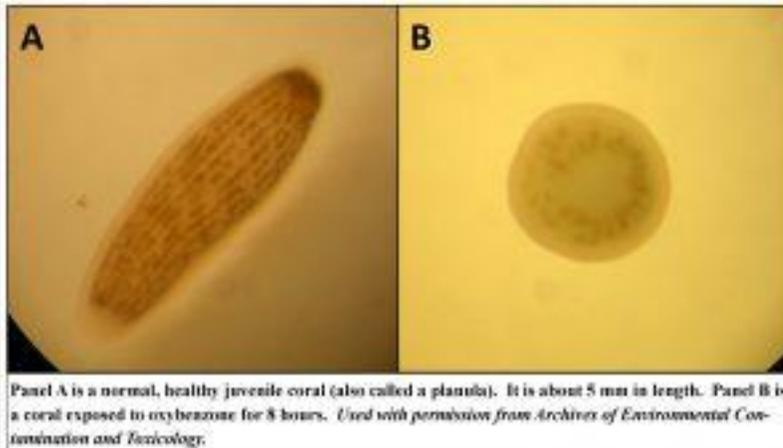
swimming pools or along beaches[9]·[10]·[11]. Oxybenzone in a commercial sunscreen formulation can transfer from the lotion or spray into the body, and be detected in urine within 30 minutes to several hours of application[12]·[13]. Oxybenzone body-contamination is widely prevalent in the general human population, with some nationalities having higher levels than others[14]. One study found that 96.8% of participants' urine was contaminated with oxybenzone, indicating the almost-universal prevalence of exposure in the human population[15]·[16]. Oxybenzone can contaminate semen[17], placenta and breastmilk of marine mammals and humans[18]·[19]·[20]·[21]. Oxybenzone can both bioaccumulate, and can be biomagnified[22]. Oxybenzone has been found in bird eggs, fish, coral, humans, and other marine mammals[23]·[24].

Oxybenzone Ecotoxicology



Oxybenzone and many of its metabolites are documented mutagens, especially when exposed to sunlight[25]·[26]·[27]·[28]·[29]. They can cause genotoxicity either from induction of photo-oxidative stress or adduction to DNA directly through bio-activation by cytochrome P450 enzymes[30]·[31]·[32]. Oxybenzone and other benzophenones can induce pro-carcinogenic activities by inducing cell proliferation in cancer cells lines that are receptive to estrogenic compounds[33]·[34]·[35]. Recent studies have also documented that oxybenzone increases metastasis potential (cellular proliferation) via a non-estrogenic mechanism[36].

Oxybenzone is a photo-toxicant, especially in the presence of ultraviolet light⁴. This means that the greater the light intensity, especially in the UV and near-UV spectrum, new forms of toxicity manifest, and usually in a dose-dependent manner of both oxybenzone and light.



In mammals, especially humans, oxybenzone has been shown to induce photo-allergic contact dermatitis in 16%-25% of the population[37]·[38]·[39]. Oxybenzone causes toxicity to sperm development and sperm viability, reduced prostate weight in mature males, and reduced uterine weight in juvenile females[40]·[41]. In rodents, it reduced fecundity and induced idiopathic sudden death in lactating mothers[42]. Several recent studies have shown a strong association between urinary and seminal oxybenzone concentrations and increased reproductive diseases and reduced fecundity[43]·[44]. There is a building body of evidence of the estrogenic and anti-androgenic endocrine disrupting mechanisms of oxybenzone in mammals[45]·[46]. One study indicated an increased occurrence of endometriosis in women exposed to concentrations of oxybenzone, while another study showed a positive association with uterine leiomyoma[47]·[48]. Oxybenzone has also been associated with altered timing of breast development in girls[49].

Oxybenzone is a notorious estrogenic endocrine disruptor, causing male fish to become feminized and inducing egg protein production in males and juveniles[50]·[51]·[52]. Oxybenzone causes a reduction in the number of eggs a female fish will produce[53]·[54]·[55]. In fish, oxybenzone is metabolized into benzophenone-1, a much more potent estrogenic disruptor[56]. Oxybenzone will also cause radical behavioral changes in fish, causing them to lose “territorial” behavior[57].

Oxybenzone can have devastating effects on invertebrates, especially on juvenile developmental stages⁴. In coral, it can cause coral bleaching, DNA damage, planula deformity, mortality, and skeletal endocrine disruption⁴. For coral planula, gross toxicological effects were seen as low as 6.5 ppbillion in a 24-hour period, and cellular effects were seen as low as 72 pptillion in a 4-hour period. In bivalves, growth inhibition occurred around 2-3 ppmillion^[58]. In shrimp larvae, growth inhibition was seen around 421 ppbillion⁴⁹.

Oxybenzone is even toxic to microalgae, such as *Isochrysis galbana*, at levels comparable to coral, such as 4 ppbillion⁴⁹.

Oxybenzone is also associated with several human diseases, especially of fetal-development diseases associated with prenatal exposure to oxybenzone^{[59]·[60]}. Hirschsprung's disease, a development abnormality thought to afflict every 1 in 2,000 births, has been linked to maternal exposure to oxybenzone, by interfering with the migration neural crest cells during embryonic development^[61].

Emerging Science regarding Oxybenzone: a human-health warning.

Oxybenzone can contaminate hot-tubs and swimming pools with concentrations in the parts per billion⁵. If these pools use chlorine or bromine as a disinfectant, the oxybenzone undergoes a chemical reaction and can become “chlorinated” or “brominated – meaning a chlorine or bromine is conjugated to the oxybenzone, changing its chemical structure and chemistry^{[62]·[63]}. Very recent studies show that the chlorinated forms of oxybenzone are *significantly more toxic* than normal oxybenzone, acting as significant DNA damage agents^{[57]·[58]·[64]}. A by-product of this oxybenzone chlorination is chloroform^[65].

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Ban on Many Sunscreen Products Likely to Pass in Hawaii Senate

March 3, 2017



Ocean Tourism Coalition

The Voice for Hawaii's Ocean Tourism Industry
Century Square-1188 Bishop St., Ste. 1003
Honolulu, HI 96813-3304
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March 30, 2017

Testimony To: House Committee on Consumer Protection & Commerce
Representative Roy Takumi, Chair

From: Tim Lyons, CAE
Executive Director

Subject: S.B. 1150, SD 2, HD 1 – Relating to Preserving Coral Reefs

Aloha Chair Takumi and Members of the Committee:

I am Tim Lyons, Executive Director of the Ocean Tourism Coalition (OTC) Hawaii's State-wide organization. We represent the 300 Small Commercial Passenger Vessels operating out of State Harbor facilities. We speak in **Conditional Support of SB 1150, SD2, HD1 with proposed amendments:**

We agree with the intent of this bill and protecting our coral reefs from possible damage due to oxybenzone pollution. That is important to us and commercial operators are highly motivated to protect our reefs. We are not opposed to inform our customers that they cannot use sunscreens that contain oxybenzone, but once customers have been notified of the prohibition, all liability for violations should rest solely with the customer.

Accordingly, we support the ban of harmful sunscreens, and the sale of these products, but would be opposed to any regulation developed by DLNR/DOBOR that would require boat operators to act as enforcement agents (e.g. conducting bag checks) or be liable for violations after informing customers of the prohibition.

We do not think we have the authority to confiscate probable products or stop a customer from applying some kind of lotion. Should we demand to see the label?

We propose the following amendment:

“(3) Requiring all commercial use permittees operating in marine life conservation districts to inform their customers that the use or application of sunscreen, sunblock, or cosmetic containing oxybenzone or other chemicals deemed harmful to coral reefs by the Department is prohibited in marine life conservation districts

Commercial use permittees will not be liable for customer violations after meeting this requirement.”

Thank you for your consideration.



PERSONAL CARE
PRODUCTS COUNCIL

March 29, 2017

The Honorable Roy M. Takumi
Chairman, Committee on Consumer Protection & Commerce
Hawaii State Capitol, Room 329
415 South Beretania Street
Honolulu, HI 96813

RE: Opposition to SB 1150, SD2, HD1

Chairman Takumi:

On behalf of the Personal Care Products Council (the Council), I am writing to express opposition to Senate Bill 1150, SD2, HD1 which would prohibit the sale and use of sunscreens and cosmetics containing oxybenzone and is under consideration by the Committee on Consumer Protection & Commerce on March 30, 2017.

The Council is the leading national trade association representing the cosmetic and personal care products industry. The Council's approximately 600 member companies manufacture and distribute the vast majority of products marketed in the U.S. As the makers of a diverse range of products that consumers rely on daily, from sunscreen, shampoo, and toothpaste to antiperspirant, moisturizer and lipstick, personal care product companies are global leaders committed to safety, quality and innovation.

Sunscreen products are vital to human health. A state-specific ban and restriction on the use of this product would put the citizens of Hawaii and tourists visiting the state at great risk. The U.S. Food and Drug Administration (FDA), the Centers for Disease Control and Prevention (CDC), the U.S. Surgeon General, the American Academy of Dermatology (AAD), the Skin Cancer Foundation and health care professionals worldwide emphasize that using sunscreens is a critical part of a safe sun regimen. The dangers of sun exposure are clear and universally recognized by public health professionals and dermatologists. The National Institutes of Health Report on Carcinogens identifies solar UV radiation as a 'known human carcinogen.' A single bad burn in childhood greatly increases the risk of developing skin cancer later in life.

Oxybenzone is an FDA approved critical ingredient to the U.S. sunscreen market. It is a broad spectrum sunscreen, absorbing both UVA and UVB rays, that also photostabilizes other sunscreens to provide long lasting protection. The cost of oxybenzone containing sunscreens is substantially less than other alternative ingredients. Consumer costs for effective sunscreen products that have the same or similar high SPF levels will increase significantly with no measurable environmental impact.

This legislation is not based on proven science, but rather is based on a single laboratory experiment that lacks sufficient scientific evidence connecting a sunscreen ingredient to coral bleaching. Regulations and

legislation should be based on validated methods, reproducible studies, and conducted by more than one independent lab. The laboratory experiment was based on preliminary research conducted under exaggerated laboratory conditions, which do not accurately reflect the complexity of the natural marine environment. According to noted scientists, coral requires an elaborate ecosystem to survive. Transporting coral to an artificial setting alone, such as a laboratory, makes the coral less viable and likely to die in the face of any disturbance. In addition, the data presented by Downs *et al.* (2015) raise questions over the validity and reliability of the study's analytical and toxicological findings.

In a recent news article, Terry Hughes, Director of the Australian Research Council Centre of Excellence for Coral Reef Studies at James Cook University, suggests that extrapolations asserting sunscreen is damaging the world's coral "are a bit of a stretch." He continues, "the conclusion from the media is sunscreen is killing the world's coral, and that's laughable." Another study involving five weeks of chronic exposure to UV filters at concentrations above those reported in natural sea waters reported that sunscreens did not induce coral bleaching nor reduce the photosynthetic efficiency of the symbiotic micro-algae.

The threat to the world's coral reefs is a very serious concern. According to the U.S. National Oceanic and Atmospheric Administration's (NOAA) Coral Reef Conservation Program, coral reefs are impacted by an increasing array of hazards – primarily from global climate change, ocean acidification, and unsustainable fishing practices. Climate change and ocean warming are the most notable culprits for reef bleaching. According to NOAA, coral bleaching events have occurred as the world's oceans temperatures have increased to the warmest levels recorded since measuring began in the late 19th century.

SB 1150 SD2, HD1, although well intended, lacks the necessary scientific evidence to demonstrate that this sunscreen ingredient is in any way responsible for coral bleaching. Moreover, skin cancer is the most commonly diagnosed cancer in the United States. We fear this legislation will create confusion, put consumers' health at risk and potentially discourage the use of sunscreens – an important part of a safe sun regimen. Oxybenzone based sunscreens are affordable daily use products that have excellent skin cancer prevention properties that cannot be easily attained using alternative ingredients.

Since this legislation is based on one, selectively chosen, laboratory experiment, it would seem appropriate to support further research, and not rush to judgement.

Please oppose.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink that reads "Michael F. Thompson". The signature is written in a cursive, flowing style.

Michael F. Thompson, Senior Vice President, Personal Care Products Council

Cc: Members, Committee on Consumer Protection & Commerce



Imanaka Asato
A LIMITED LIABILITY LAW COMPANY

March 30, 2017

Representative Roy M. Takumi, Chair
Representative Linda Ichiyama, Vice Chair
Members of the House Committee on Consumer
Protection & Commerce
Twenty-Ninth Legislature
Regular Session of 2017

RE: SB 1150, SD2, HD2 Relating to Preserving Coral Reefs
Hearing date: March 30, 2017, 2:00 pm

Aloha Chair, Vice-Chair and Members of the Committee,

Mahalo for the opportunity to submit testimony on behalf of Quest Global Management/Dolphin Quest. Dolphin Quest supports the proposed legislation to protect Hawai'i's coral reefs by prohibiting the use of sunscreens and cosmetics containing oxybenzone at beaches or in the ocean. This chemical has been found to harm coral reefs.

As noted on Hawai'i's Department of Land and Natural Resources website, "Recent studies have shown that oxybenzone (and octinoxate & homosalate) causes deformities in coral larvae (planulae), making them unable to swim, settle out, and form new coral colonies. It also increases the rate at which coral bleaching occurs. This puts coral reef health at risk, and reduces resiliency to climate change... Researchers have found oxybenzone concentrations in some Hawaiian waters at more than 30 times the level considered safe for corals."

Many other locations such as Mexico and the Caribbean have also joined in the effort to reduce damage to corals by prohibiting sunscreens containing oxybenzone and octinoxate & homosalate. We hope that Hawai'i will also follow in this forward-thinking direction to help preserve its coral reef health.

Dolphin Quest advocates for conservation and preservation efforts to protect the oceans and its many inhabitants, including corals. The negative impact of human activity can be reduced by this legislative measure and Dolphin Quest promotes its passage and other activities that educate humans about the oceans.

Mahalo for your consideration.

Sincerely,

IMANAKA ASATO LLLC

Michael L. Iosua

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 4:22 PM
To: CPCtestimony
Cc: zlaprade@aol.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Zachary LaPrade	Quicksilver Charters	Oppose	No

Comments: Quicksilver would be in support of the bill provided that Section 4 is removed. Commercial operators are willing to educate visitors, but cannot agree to additional rules developed by DLNR without further detail. Any regulation developed that would require commercial operators to act as enforcement agents would be strongly opposed. Please remove Section 4 and pass SB1150.

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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RAW ELEMENTS®

Certified Natural Sunscreen

March 29, 2017

**Letter of support to amend SB 1150, SD2 Preserving Coral Reefs
by Prohibiting the Sale of Oxybenzone-Containing Products**

To the Hawaii State Legislature,

On behalf of the entire team of Raw Elements USA, we strongly ask that you amend Senate Bill 1150, SD2 to a ban on the sale of sunscreen and products that contain oxybenzone.

Although we have made great strides to “prohibit the use or application of products containing oxybenzone while on a beach or in the ocean unless it is a prescription drug,” this is simply not going to make enough of a difference. I strongly encourage this committee to consider other options, such as to “prohibit the sale” of oxybenzone products, similar to the language found in SB260, allowing for a medical prescription to be used.

When I set out to create a sunscreen that was made of natural ingredients, it was not just for the benefit of humans, but for our entire planet. Through my research and working with scientists such as Dr. Craig Downs, I discovered the damage that chemicals such as oxybenzone, avobenzene, octinoxate, ethylhexyl methoxycinnamate, homosalate, octisalate, octocrylene have caused to the reefs around the world. I worked long and hard to make sure that it was possible to have a sunscreen that was incredibly safe and effective without using any of these harsh chemicals.

I am not trying to plug my company, rather show that there is no trade-off in the efficacy or protection offered by sunscreens without oxybenzone. In fact, mineral-based sunscreens with zinc oxide as their only active ingredient are safer for both humans and marine life.

Education is essential here. Unfortunately, it will not be enough to truly protect Hawai'i's corals. Please support and amend SB1150, SD2 as a “BAN on SALES”.

Sincerely,

Brian Guadagno
CEO, Raw Elements USA

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 8:10 AM
To: CPCtestimony
Cc: sailingmaui@yahoo.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Peter Wood	Sailing Maui Inc.	Oppose	No

Comments: As a snorkel tour business operator, We are very concerned with the health and well being of our coral reefs. We do inform guests about reef safe sun products, but strongly appose being mandated to control what our passengers are using. We will not do bag checks or sample the products already on their skin. This burden should be undertaken at higher levels to ban the production and sale of such products in Hawaii. Thank you, Peter Wood 808-870-3672

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

Do not reply to this email. This inbox is not monitored. For assistance please email webmaster@capitol.hawaii.gov

CPCtestimony

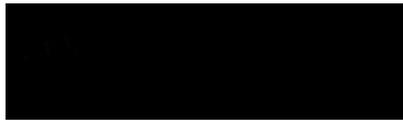
From: Ryan Kell <seathesummit@gmail.com>
Sent: Wednesday, March 29, 2017 2:32 PM
To: CPCtestimony

To Honorable Representative Roy Takumi, Chair,

Please consider the detrimental effects sunscreen chemicals have on marine life around the world. People in places like Hawaii lose an average of 8lbs of sunscreen a year from their bodies. The math is simple. This effect is killing our reefs and Hawaii now has the opportunity to set the stage for the rest of the world to follow. Please be a part of this positive movement.

--

Ryan Kell
Owner & Creator



805.256.5668

seaandsummitsunscreen.com

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HOUSE COMMITTEE ON COMMERCE AND CONSUMER AFFAIRS

Thursday, March 30, 2017 2PM Room 329

In SUPPORT SB 1150 SD2 HD2 Relating to Preserving Coral Reefs

Aloha Chairman Takumi and members of the Commerce and Consumer Affairs Committee,

On behalf of our 20,000 members and supporters the Sierra Club of Hawai'i strongly supports SB 1150 HD1, which seeks to ban the use of any sun protectant that contains oxybenzone within a marine life conservation district. Oxybenzone is a chemical UV filter that is added to nearly 70 percent of non-mineral sunscreens¹ and commonly washes into our oceans when applied at the beach, harming our coral reef ecosystems.

Oxybenzone damages coral DNA and inhibits its ability to reproduce, causes deformities on the coral, makes coral more susceptible to bleaching, and initiates endocrine disruption.² These pathologies can occur at concentrations as low as 62 parts per trillion, but some beaches in Hawai'i have oxybenzone levels higher than 700 parts per trillion³, a major concern when our reef system annually generates about \$800 million in gross revenues.⁴

Panels held at the International Union for the Conservation for Nature (IUCN) and International Coral Reef Symposium (ICRS) in Honolulu have both suggested that Oxybenzone is toxic to corals and urge that we stop using these products^{5,6} The State's Department of Land and Natural Resources is also asking people who enter the ocean to avoid using sunscreens which contain oxybenzone.⁷

¹ <http://www.ewg.org/sunscreen/report/the-trouble-with-sunscreen-chemicals/>

² Downs CA, Kramarsky-Winter E, Segal R, et al. Toxicopathological Effects of the Sunscreen UV Filter, Oxybenzone (Benzophenone-3), on Coral Planulae and Cultured Primary Cells and Its Environmental Contamination in Hawaii and the U.S. Virgin Islands. *Arch Environ Contam Toxicol* 2015 Oct 20. doi: 10.1007/s00244-015-0227-7.

³ <http://www.marinesafe.org/blog/2016/05/12/how-sunscreen-is-putting-coral-reefs-at-risk/>

⁴ http://www.hawaii.edu/ssri/cron/files/econ_brochure.pdf

⁵ <http://www.civilbeat.org/2016/09/drop-the-oxybenzone-or-stop-swimming-in-hawaiian-waters/>

⁶

<http://www.honolulumagazine.com/Honolulu-Magazine/June-2016/Your-Sunscreen-Might-Be-Killing-Coral-Reefs-in-Hawaii/>

⁷

<http://governor.hawaii.gov/newsroom/latest-news/dlnr-news-release-ocean-users-urged-to-use-reef-safe-sunscreens/>

While these voluntary, educational efforts to curb the usage of these products are commendable, an effective way to prevent these chemicals from entering our waterways is to pass SB 1150 HD1 and ban the use of sun protectants containing oxybenzone on the beaches of Hawai'i that are within marine conservation districts. We would prefer if the ban on the use of products containing oxybenzone apply to all beaches and not just those within marine conservation districts. Additionally, we suggest that further amendments be made that ban the use sale, offer for sale, or distribution of these products throughout the state. Many visitors purchase sunscreen once they arrive to the islands and this bill ensures that Oxybenzone and other reef harming chemicals will not be sold in the state. Therefore, the ban will encompass both the use of oxybenzone-containing sun protectants as well as their sale on the islands.

Although there are many causes of reef degradation, SB 1150 HD1 provides a sensible opportunity to help maintain the economic, ecological, cultural, and recreational value of Hawai'i's reef systems. No one likes to see a film of floating chemical-laden sunscreen on our beaches. Banning oxybenzone protects our vulnerable reef ecosystems from toxic products and promotes the usage of reef-safe sunscreens that are mineral, not chemical based.

Thank you very much for this opportunity to provide testimony on this important issue.

Mahalo,

Martha Townsend
Director



Monday, March 29, 2017

Dear Esteemed Senators and Members of the House:

I am writing in support of Senate Bill 1150 SD2 / HD2 and all legislative action that will reduce the concentrations of oxybenzone in Hawaiian waters. I do, however, encourage you to consider a ban on the sale of oxybenzone containing products, rather than a ban on the beaches, which could be more difficult to enforce.

I am the founder and formulator of Stream2Sea, an environmentally friendly product line formulated without using oxybenzone or any other ingredients known or suspected to harm the coral reef environment. A cosmetic chemist with more than 20 years experience formulating natural products, and an avid scuba diver and instructor, I created Stream2Sea because I knew we could formulate effective, consumer friendly products to protect ourselves while not harming our precious underwater resources. We are a young company, but have been experiencing rapid growth, especially in Hawaii. Our products can be found at ecoconscious retailers throughout Hawaii including Down to Earth, Island Naturals, Pacific Whale Foundation, Big Island Divers, and Kona Honu Divers among others.

We use only non-nano titanium dioxide as our active ingredient in our sunscreens. Our formulas have been independently tested by FDA-validated labs to meet or exceed FDA standards for SPF, broad spectrum and water resistance claims. Our products are both effective and cost comparative with other performance-based sport sunscreens, without the potential negative environmental effects. Consumers are actively looking for eco-friendly and ocean safe non-nano mineral based sunscreens like those offered by Stream2Sea.

Before bringing Stream2Sea to the market, I contracted with Eckerd College to perform various toxicity trials from *C. Elegans* and fish to coral larvae (see attached). We have proven that all our formulas readily biodegrade in fresh water and saltwater, and are non-toxic to all species tested, including the coral *Porites astreoides*.

I applaud the Hawaiian legislature for bringing this issue to the table. There are many UV absorbers that can be effectively used to protect our skin, without the detrimental effects shown with oxybenzone. There are enough human and environmental studies showing oxybenzone is not safe for continued use. It is not prudent, however, to wait for the FDA to remove this ingredient from our approved listing. The European Union has banned more than 1,300 cosmetic ingredients over the last decade. The FDA has banned microbeads.



STREAM2SEA®
—EcoConscious • Biodegradable—

Again, I fully support your efforts. Coastal communities around the world are closely watching this legislation. I sincerely hope that you will support efforts to bring this issue to the table and through the legislature. If I can be of any assistance, please do not hesitate to contact me.

Consciously,

Autumn P Blum
Formulator & CEO
Stream2Sea, LLC
autumn@stream2sea.com

“Again, I want to thank you so much for the opportunity to engage our students in such an important set of experiments. I also want to commend you on producing a set of products that have stood up to rigorous testing and have proven to be truly ecoconscious.”

Denise Boyce Flaherty, Ph.D.
Assistant Professor of Biology, Eckerd College



We are committed to your health and the health of the planet. Our products are always conscientiously tested.



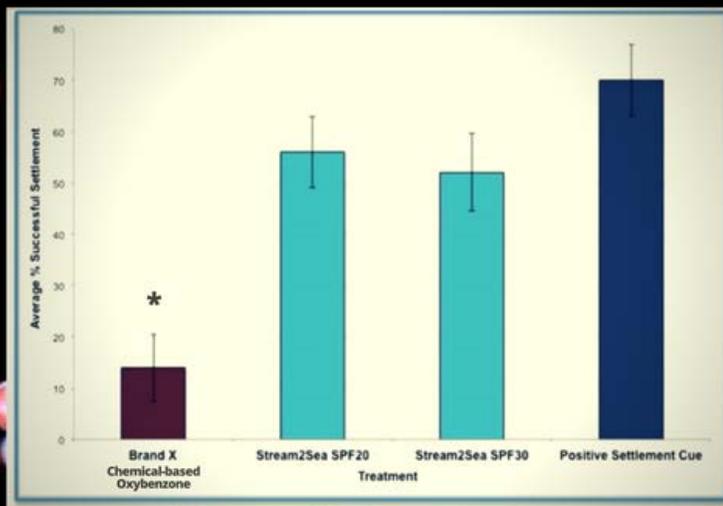
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"We tested Stream2Sea against a chemical-based sunscreen on coral larvae. Stream2Sea had no significant negative effects on coral larval settlement."

Dr. Koty Sharp
Assistant Professor, Roger Williams University



We are committed to your health and the health of the planet. Our products are always conscientiously tested.



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March 29, 2017

RE: Support for SB 1150 SD2 HD2 (Relating to Preserving Coral Reefs)

Consumer Protection & Commerce (CPC) Committee Hearing on Thur., 3/30, 2:00pm, Rm. 329.

Dear Chair Takumi, Vice Chair Ichiyama and CPC Committee Members,

As the Hawaii Manager of the Surfrider Foundation, I am writing in strong support of SB 1150 SD2 HD2. The Surfrider Foundation's five chapters in Hawaii and our extensive network of supporters are concerned about the damage chemicals like oxybenzone are doing to our reef system, which annually generates about \$800 million in gross revenues.

On behalf of our 10,000 supporters, activists and members across the state, we strongly support efforts to ban sunscreens with the toxic chemical oxybenzone in Marine Life Conservation Districts (MLCD) due to its destructive effects on Hawaii's coral reefs. But we also seek to ban the use of sunscreen or personal care products containing oxybenzone at all of our beaches or in the ocean. As a chemical UV filter, oxybenzone is added to nearly 70 percent of non-mineral sunscreens and commonly washes into our oceans when applied at the beach, harming our coral reef ecosystems.

Along with damaging coral DNA and inhibiting its ability to reproduce, oxybenzone causes deformities on coral reefs, makes them more susceptible to bleaching, and initiates endocrine disruption. In 2016, scientific panels held at the International Coral Reef Symposium (ICRS) and the International Union for the Conservation for Nature (IUCN) in Honolulu both showed that Oxybenzone is toxic to corals and recommended a ban on sunscreen products that contain it. There have also been studies showing that this chemical and its many derivatives are toxic to human health as well.

The State's Department of Land and Natural Resources is also asking people who enter the ocean to avoid using sunscreens that contain oxybenzone. We support educational efforts to curb the usage of these products, but they are not enough. This bill is a good first step, but the most effective way to prevent these chemicals from entering our waterways is to ban the sale and distribution of these products statewide. Many visitors purchase sunscreen once they arrive in the Islands, and we need a bill to ensure that oxybenzone and other reef-harming chemicals will not be sold in the State. Our reefs are an important and valuable part of Hawaii's ecosystem and economy, and we must do all we can to protect them.

There may be other causes of reef degradation, but this bill offers a first stop to help maintain the economic, ecological, cultural, and recreational value of Hawai'i's reef systems. As a regular ocean swimmer and surfer on Oahu's South Shore, I can tell you that I often see a film of chemical-laden sunscreen in our waters. This bill is an important first step to protect our vulnerable reef ecosystems and promote the usage of reef-safe sunscreens that are mineral-based and not made from harmful chemicals to our reefs and skin. Mahalo for your consideration.

Aloha,

Stuart Coleman

Stuart H. Coleman, Hawaii Manager

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 10:11 AM
To: CPCtestimony
Cc: valerie@isomedia.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Valerie Barnes	Sustainable Kohala	Support	No

Comments: Our coral reefs are suffering and we must do everything we can to sustain them. They are not only important for our tourism, but also for locals who rely on the fish who rely on the reefs for sustenance. Please pass this measure.

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TO: Honorable Chair Takumi, Vice-Chair Ichiyama, and Consumer Protection and Committee Members

DATE: 3-30-17, 2:00 p.m.

SUBMITTED BY: Keith Dane, Hawaii Policy Advisor, State Affairs, Humane Society of the United States, kdane@humanesociety.org, Tel: 301-312-1489; and Teresa M. Telecky, Ph.D., Director, Wildlife Department, Humane Society International, ttelecky@hsi.org, Tel: 301-258-1430

RE: SUPPORT for SB 1150 SD2, HD2 Relating to Preserving Coral Reefs

The Humane Society of the United States (HSUS) and Humane Society International (HSI), support SB 1150 SD2, HD2 which would, if enacted:

- Prohibit the use or application of nonprescription sunscreen, sunblock, or cosmetic containing oxybenzone or other chemicals deemed harmful by the Department of Land and Natural Resources (DLNR) within marine life conservation districts (MLCDs);
- Require all commercial use permittees operating in marine life conservation districts to inform their customers that the use or application of sunscreen, sunblock, or cosmetic containing oxybenzone or other chemicals deemed harmful to coral reefs by DLNR is prohibited in marine life conservation districts;
- Require counties that issue commercial scuba and snorkeling permits or control public access to nature preserves and marine life conservation districts used for scuba diving or snorkeling to prohibit the commercial sale of sunscreen, sunblock, or cosmetic containing oxybenzone or other chemicals deemed harmful to coral reefs by DLNR in concessions that serve nature preserves and marine life conservation districts; and
- Allow DLNR to propose rules that prohibit the use of sunscreen, sunblock, or cosmetic containing oxybenzone or other chemicals deemed harmful to coral reefs by DLNR in any area as needed to conserve state marine resources.

We thank the Committee for addressing this important matter that affects Hawaii's nearshore coral reefs.

Numerous studies have shown that oxybenzone in the marine environment can be harmful to coral reefs and marine life (Kim et al. 2014, Kim and Choi 2014, Tsui et al. 2014, Downs et al. 2015). These studies clearly indicate that oxybenzone poses a risk to fishes, through

endocrine disruption and reproduction performance, for example, and to hard corals through bleaching. These threats are heightened in marine recreational areas frequented by beach goers, swimmers, snorkelers and divers whose sunscreen washes off when they enter the water. Worldwide, it is estimated that 90% of snorkeling or diving tourists are concentrated on 10% of the reefs (U.S. National Park Service). Hawaii's MLCDs have an abundance of fishes compared to the majority of the state's reefs which are severely depleted. This abundance of wildlife is a major draw to tourists and Hawaii's most beautiful and popular reefs are likely exposed to the most sunscreen pollution.

It has been estimated that 4,000 – 14,000 tons of sunscreen enters coral reef areas around the world annually (U.S. National Park Service, Downs et al. 2015). Surveys around Hawaii's coral reefs found oxybenzone levels at concentrations 12 times higher than the level at which it impacts juvenile coral (Downs et al. 2015).

The unprecedented coral bleaching events of 2014 and 2015 had devastating effects on Hawaii's corals. A 2016 report by The Nature Conservancy found 32 – 90% of bleached coral colonies died in some West Hawaii areas. Though oxybenzone may be just one of many stressors impacting Hawaii's coral reefs, the inevitability of future ocean warming events and subsequent coral bleaching makes it imperative to reduce the stressors to corals and increase their potential to recover and survive.

HSUS and HSI sincerely thank the Committee for taking up this important matter. ***We urge the Committee to pass SB 1150 SD2, HD2*** which will help reduce oxybenzone pollution and harm to Hawaii's coral reefs and wildlife.

Thank you for this opportunity to provide testimony.

Testimony of The Nature Conservancy of Hawai'i
Supporting S.B. 1150 SD2 HD2 Relating to Preserving Coral Reefs
House Committee on Consumer Protection and Commerce
Thursday, March 30, 2017, 2:00PM, Room 329

The Nature Conservancy of Hawai'i is a private non-profit conservation organization dedicated to the preservation of the lands and waters upon which life depends. The Conservancy has helped to protect nearly 200,000 acres of natural lands in Hawai'i. We manage 40,000 acres in 14 preserves and work in 19 coastal communities to help protect the near-shore reefs and waters of the main Hawaiian Islands. We forge partnerships with government, private parties and communities to protect Hawai'i's important watershed forests and coral reefs.

The Nature Conservancy supports S.B. 1150 SD2 HD2. Preliminary research indicates that there may be a connection between oxybenzone and degraded reef health, and the precautionary principle suggests that we do what we can to minimize this potential threat.

However, while educating consumers and regulating the use of oxybenzone at Hawai'i's beaches may help our reefs, it is only a first step. Support for this measure should not stop us from doing the hard work that is needed to protect our coral reefs and nearshore fisheries from the clear and present danger of additional chemicals, nutrients and sediment entering our nearshore waters, invasive algae smothering our reefs, and unsustainable fishing practices depleting our local fisheries. With the added threats from global climate change predicted to increase over the next 50 years, the need to protect our reefs and other aquatic resources has never been more urgent.

Hawai'i's nearshore waters are home to more than 7,000 forms of marine life, a quarter of them found nowhere else on Earth. Our vast coral reefs and entire near shore ecosystem are valuable assets that contribute culturally and economically to Hawai'i's future. Coral reef ecosystems create habitat for many fish species with important subsistence, recreational and commercial value; support tourism and recreational industries; and shelter coastlines from natural disturbances. Our life and lifestyle in Hawai'i depends upon a healthy and thriving marine environment.

While we appreciate the bills this session proposing to prohibit or regulate oxybenzone, **we also urge the Legislature to continue supporting efforts to address the full range of threats to our reefs, fisheries and other marine resources. These actions include:**

- **Sufficient funding and personnel for the Department of Land and Natural Resources to:**
 - **Implement existing and develop additional marine management rules to protect and restore our coastal fisheries;**
 - **Build compliance with and enforcement of existing marine management rules and laws;**
 - **Collaboratively develop a strategic plan to address coral bleaching and guide management decisions;**
 - **Obtain the information needed to continue adaptively managing coastal resources based on the best available science and traditional knowledge; and**
 - **Build on its on-the-ground and in-water management work with partners to care for coastal and marine resources.**
- **Supporting the efforts of coastal communities around the islands that are working to co-manage their resources in partnership with the DLNR.**

Thank you for the opportunity to testify on this measure.

BOARD OF TRUSTEES

Mark Agne Paul Alston Christopher Benjamin Dr. C. Tana Burkert Anne Carter Richard Cooke III Brian Doyle
Thomas Gottlieb James Haynes III Sean Hehir Eiichiro Kuwana Duncan MacNaughton Kathy Matsui
James Polk Jean Rolles Scott Rolles Crystal Rose Dustin Sellers Nathan Smith Peter Tomozawa

Testimony of Denver Saxton Coon on behalf of Trilogy Corporation, with Conditional Support of SB 1150, SD2, HD2 Relating to Preserving Coral Reefs.

COMMITTEE ON CONSUMER PROTECTION & COMMERCE

Rep. Roy M. Takumi, Chair
Rep. Linda Ichiyama, Vice Chair

Rep. Henry J.C. Aquino Rep. Chris Todd
Rep. Ken Ito Rep. Ryan I. Yamane
Rep. Calvin K.Y. Say Rep. Beth Fukumoto
Rep. Gregg Takayama

NOTICE OF HEARING

DATE: Thursday, March 30, 2017
TIME: 2:00 PM
PLACE: Conference Room 329

Chair Takumi, Vice Chair Ichiyama and member of the CPC Committee:

Aloha. My name is Denver Saxton Coon. I am general counsel for Trilogy Corporation dba Trilogy Excursions on the island of Maui. Trilogy Excursions has been operating for over 43 years and is committed to educating its guests on how they can help protect Hawaii's marine ecosystem. I am testifying in **Conditional Support of SB 1150, SD2, HD2 with proposed amendments** that I believe will protect Hawaii's marine environment without harming commercial operators.

Trilogy Excursions agrees with the intent of this bill and protecting our coral reefs from possible damage due to oxybenzone pollution. Trilogy strongly believes that the most effective way to protect our reefs is by banning the sale of these harmful products. In the event that a harmful product is bought in another state and brought into the islands, then education will be the next defense. Pursuant to Section 3 of the bill, Trilogy is willing to inform its customers that they cannot use sunscreens and other cosmetics that contain oxybenzone in marine life conservation districts.

However, Trilogy cannot support Section 4 of SB 1150, SD2, HD2. While the problem is clear, the rules that would be developed by DLNR are not. The greatest hurdle facing a regulation that attempts to ban the use of these harmful products will be enforcement. The State does not have the resources to check every ocean goer's bag or conduct skin tests on every individual before they enter the water. The fear then is that DLNR will create rules that will require commercial operators to act as enforcement agents. Any such regulations would be incredibly harmful to the ocean tourism industry and are strongly opposed.

Accordingly, Trilogy believes that **Section 4 should be removed from the bill** and the State's resources should be focused on ensuring that harmful products are not available for purchase. Commercial operators will be there to act as a second line of defense and educate visitors should harmful products make their way into marine life conservation districts.

Mahalo,

Denver Saxton Coon
Trilogy Corporation
General Counsel
denver.coon@sailtrilogy.com

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 5:28 AM
To: CPCtestimony
Cc: alex.beers@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
alex beers	Individual	Comments Only	No

Comments: To whom it may concern, Please ban the use of sunscreen with oxybenzone in them. Its the right thing to do, simple. Let's just keep it simple in Hawaii and do the right thing for the right reasons. Thank you in advance, Alex Beers and family

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From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, March 28, 2017 11:48 PM
To: CPCtestimony
Cc: birdofparadise@hawaii.rr.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/28/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Andrea Nandoskar	Individual	Support	No

Comments: Please pass this bill which is a first step toward protecting our precious coral reefs through limited restrictions on the sale and use of sunscreens containing oxybenzone in especially sensitive coral reef areas. Studies indicate our precious coral reefs are stressed by even small amounts of oxybenzone which is toxic to coral as well as a potential hormone disrupter. There are ample alternative reef-safe sunscreens that can protect our skin without killing reefs. Mahalo for your consideration. Aloha,
AndreaNandoskar

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 1:30 PM
To: CPCtestimony
Cc: mollybbill@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Angie Ali	amaniek9	Support	No

Comments: Having witnessed first hand the devastation of these poisons on our reefs I hope we don't have to wait any longer for this to pass. Tourists come, drown our reefs and leave. At this rate we won't have anything left for them let alone for us and our future generations. It's awefuk to watch and smell the slimy poison floatin at he too if our favorite beach parks and ocean access spaces. Dead reef usually follows and I have seen it bleach and die within a year .

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From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, March 28, 2017 7:25 PM
To: CPCtestimony
Cc: ariannafeinberg@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/28/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Arianna Feinberg	Individual	Support	No

Comments: Please support this bill and strengthen it to ban the sale of oxybenzone sunscreen in Hawaii. I am a lifelong Maui resident and snorkeling enthusiast. We need to do everything in our power to help our declining coral reefs. There are many alternatives that work effectively to prevent sunburns that do not harm the reef. Thank you for your consideration of strengthening this bill!

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 9:11 AM
To: CPCtestimony
Cc: begoniabarry@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Barbara Barry	Individual	Support	No

Comments: Aloha Chair and Committee Members, This is common sense due to the fragile conditions of our reefs. Please do what is pono for our reefs and ocean. Support SB1150. Mahalo, Ms. Barbara Barry

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 1:21 PM
To: CPCtestimony
Cc: bethleeds@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Beth Leeds	Individual	Support	No

Comments: Aloha! Please ban the toxic chemical oxybenzone Sunscreen that is killing and has killed coral in Hawaiian reefs and ocean. It is easy to use non-toxic sunscreen and will make a safe impact on our ocean and beaches. The environmental impact studies should be done first by the Lotion companies to prove safe, not the other way around. This is how the laws were written. There are numerous alternatives. Thank you for voting to ban on SB 1150! Sincerely, Beth Leeds, North Shore Hawaii

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TESTIMONY IN FAVOR OF SB1150, SD2, HD2
RELATING TO THE PRESERVATION OF CORAL REEFS
MARCH 20, 2017

Aloha Chair Takumi, Vice Chair Ichiyama and Committee members.

My name is Bob Kern. As Vice President of the Friends of Hanauma Bay, my focus is on protection of Hawaii's 1st Marine Life Conservation District. Testimony has been submitted by the Friends of Hanauma Bay which, of course, I support.

I offer this testimony, however, as private a citizen who is concerned about all of our reefs. I am proud to say that I served as a representative from the recreational diving community on DLNR's task force that planned the Pupukea MLCD.

I appreciate this opportunity to testify as a recreational user of O'ahu's MLCD's and on behalf of all of Hawaii's MLCD's in support of SB1150, SD2, HD2. I am very happy that the legislature recognizes the unique qualities of Hawaii's MLCD's and nature preserves and has taken this step to provide our reefs a higher level of protection.

An added benefit of passing this bill may be to financially benefit commercial permittees who are often small companies or individuals because it requires them to inform their customers about the hazards of oxybenzone. In the process, commercial providers may benefit by offering their customers the opportunity to purchase reef safe sunscreen from them.

Passing this bill puts Hawaii in the enviable position of demonstrating to the world its commitment to protecting the ocean environment. The world is watching as we take steps to either prevent further damage to our reefs or allow them to further deteriorate. What shall we tell the world?

Passing this bill is an important step toward more fully protecting our corals from oxybenzone. I look forward to the day when the sale of sunscreen products containing the coral killing chemical oxybenzone is banned in Hawaii.

Respectfully Submitted,

Bob Kern
1615 Wilder Avenue, #601
Honolulu, Hawaii 96822
943 9241

From: Charlotte Vick <charlotte.vick@gmail.com>
Sent: Wednesday, March 29, 2017 3:02 PM
To: CPCtestimony
Subject: Testimony

Please support SB 1150.

As a resident of the Pacific island region of more than 40 years, I have explored reefs as far south as Tonga, as far West as the Mariana Islands and the Caroline Islands, as far east as French Polynesia and as far north as Kauai. All these areas, are in danger of losing it reefs which are among the precious resources we have.

Scientists banded together not only to do the research in places around the world over the last few years, they also united to sign a pledge not to use products with this harmful ingredient in Honolulu at the International Coral Reef Symposium less than a year ago to emphasize their solidarity on this issue.

The current version of the bill before the committee should be stronger than it is. If the legislature fails to address the problems presented by this problem, it will not go away and will damage the economic, social, environmental and cultural value of Hawaii's coral reefs.

I work with the Sylvia Earle Alliance and Mission Blue. We attended the International Coral Reef Symposium in Honolulu in June 2016 as well as the IUCN World Conservation Congress in September 2016 and advocated for a ban on oxybenzone to give Hawaii reefs and reefs around the world a fighting chance to recover from a myriad of stressors.

If this is not banned now, the repercussions from the failure to act with be significant.

Charlotte Vick
Director of Engagement
Sylvia Earle Alliance
Mission Blue

*"We must protect the ocean as if our lives depend upon it -- because they do."
--Sylvia Earle*

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, March 28, 2017 9:10 PM
To: CPCtestimony
Cc: chris@mentzel.com
Subject: *Submitted testimony for SB1150 on Mar 30, 2017 14:00PM*

SB1150

Submitted on: 3/28/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Chris Mentzel	Individual	Support	No

Comments:

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From: christopher wagaman <cwaggy44@gmail.com>
Sent: Wednesday, March 29, 2017 10:54 AM
To: CPCtestimony
Subject: Oxybenzone Ban

**To: Honorable Representative Roy Takumi, Chair, CPC.
Testimony in SUPPORT SB1150, SD2, HD2
Hearing Date 3-30-17
Conference Room 329; 2PM**

This is a testimony for the ban oxybenzone in Hawaii. We must take action now to preserve Hawaii. If Hawaii can put their stamp on changing the way people think, it cannot only save Hawaii coral reefs but make a difference for other places in the world. Be a " First to" and make a difference in this hearing. I don't live in Hawaii but have a special place in my heart and visit quite often for business and pleasure. It is heart breaking to think why we would think any different than to make a change now. We must feel for the local people that do not even have the education regarding this issue. We all need to join forces and educate the people of Hawaii that hold that special place for us to come visit and preserve what I believe is the most beautiful place on the planet!!

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 9:27 AM
To: CPCtestimony
Cc: courtneymodel@yahoo.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Courtney Yanovitch	Individual	Support	No

Comments: I am speaking out to stop the use of coral -damaging sunscreens. Please prohibit the use of these products that contain oxybenzone. Studies show that oxybenzone and other chemicals used in sunscreens are causing major bleaching to our reefs and reefs around the world. Coral reefs are a vital part of the ecosystem. Marine life depends on them for food and habitat and this could affect the health welfare of our reefs. Please think about our islands and the impact all the tourists have on it when the visit. Mahalo for your time.

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From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, March 28, 2017 10:27 PM
To: CPCtestimony
Cc: spawaikiki@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/28/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
dennis boyd miller	Individual	Support	No

Comments: SB1150 CPC Room 329 March 30, 2017 Dennis B Miller Waikiki Aloha!
Please support this bill. Coral is vital for the survival of our ecosystem. Thank you,
Dennis Miller

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From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, March 28, 2017 11:24 PM
To: CPCtestimony
Cc: Bmcd63@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/28/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Elizabeth McDermott	Individual	Support	No

Comments: Recent studies have made it abundantly clear that oxybenzone based sunscreens are damaging and contributing to the die off of Hawaii's coral reefs. While we can't do much to stop some of the stresses our reefs suffer from climate change driven ocean warming and acidification, this is one area where we CAN act, tipping the balance to help our invaluable coral reefs. DLNR is wrong in suggesting that we should rely on to date minimally effective educational efforts in lieu of a ban, claiming that enforcement would be too difficult. The police don't catch every person speeding or failing to wear their seat belt. Still those laws act as a deterrent. And that is what this ban would do. This version of the bill gives DLNR the authority to write new rules to that effect. Let's hope they do so. I can't count the number of times I have watched both residents and tourists douse themselves in chemical sunscreen then jump directly into the ocean. There are plenty of alternatives out there. I swim for hours in the ocean using one of them. This should be a no brainer in our Marine Protected Areas. So let's start there if we need to. It's time to get these slimy, sheen producing chemicals out of our ocean, off our corals, out of the fish we eat, and out of our bodies. Hawaii of all states should be taking the lead on this. Or we will soon have no reef left. Pass the bill.

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 9:09 AM
To: CPCtestimony
Cc: emmaharberwhite@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Emily White	Individual	Support	No

Comments: Aloha. Reef health is economic health. We can ignore this threat no longer. Please support this bill. Mahalo, Emily White, JD, MA Kahului Voter

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From: Fran Fevrier <fevrierfran@gmail.com>
Sent: Thursday, March 30, 2017 2:53 AM
To: CPCtestimony
Subject: Banning oxybenzone in sunscreens: Testimony in SUPPORT of SB 1150, SD2, HD 2
Hearing Date 3-30-17

To Representative Roy Takumi, Chair, CPC; Testimony in SUPPORT of SB 1150, SD2, HD2

Dear Representative Takumi and committee members,

Thank you for taking my testimony in support of legislation to **ban oxybenzone in suncreens** on the beaches of Hawaii.

Thanks to recent research, we now know that young coral is harmed by oxybenzone, even in tiny amounts. There are many sunscreens on the market which do NOT contain oxybenzone, and do NOT harm coral, and which DO protect skin from sun. These are the only sunscreens which should be allowed on the beautiful beaches of Hawaii.

Here is a heart-breaker from my home place of Key Largo, Florida, where the coral reefs are mostly dead or dying. As I watched the reefs bleach, I thought that ocean warming and pollution were responsible. Now I also know that oxybenzone in sunscreens played a big role. The very sunscreens I slathered over myself and my children! How I wish I had known that taking the small step of purchasing a different sunscreen--one without oxybenzone in it--would have helped preserve those fragile and precious reefs.

Hawaii, please protect your coral and coral reefs from oxybenzone! Please pass legislation to ban oxybenzone from sunscreens!

Thank you for supporting the passage of SB 1150, SD2, HD2.

Fran Fevrier

--
Fran Fevrier Photography
<http://fransimages.com>

CPCtestimony

From: Honour Booth <honour@hawaii.edu>
Sent: Wednesday, March 29, 2017 12:44 PM
To: CPCtestimony
Subject: To Honorable Representative Roy Takumi, Chair, CPC.; Testimony in SUPPORT SB1150, SD2, HD2; Hearing Date 3-30-17; Conference Room 329; 2PM

Aloha mai e Representative Roy Takumi,

My name is Honour Booth and I am a student researcher at the University of Hawai'i at Mānoa. The past couple years of my research has been dedicated determining the presence of organic UV-filters such oxybenzone in the waters of O'ahu's south shore. My studies, which are in prep for publishing, have reported minimum oxybenzone concentrations as high as 2248 parts per trillion (ppt) in Hanauma Bay and 2667 ppt in Waikīkī. Previous exposure studies have shown that oxybenzone can have negative effects on coral at 62 ppt. Seeing as our underwater environment is one of the biggest draws for the tourists which our economy so heavily depends on, it would seem important that regulations be made to protect coral reefs from oxybenzone exposure.

Please let me know if you have any inquiries about my data.

me ka 'ōia'ī'o (sincerely),

Honour

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 4:57 PM
To: CPCtestimony
Cc: jnun35@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Jacqueline Chico	Individual	Support	No

Comments: To Representative Takumi, I want to submit this testimony in support of this bill to urge to listen to the advice of our scientists who are warning us about this chemical that is killing the coral in the ocean. We have a duty to help protect the coral from disappearing forever and affecting the future of many species that rely on the coral to live. This chemical can easily be removed and there are companies like badger that make sure it's not their sunscreen products. Thank you for listening.

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 10:17 AM
To: CPCtestimony
Cc: jkhaughian@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Jade Haughian	Individual	Support	No

Comments: Aloha Rep Takumi and Committee Members, I am writing in support of SB1150. I currently work at Dolphin Quest, and conservation is a big part of what we impart on our visitors and guests. I would like to be able to share with our guests that the State of Hawaii is a leader in protecting our reefs with measures such as prohibiting the use or application of sunscreen, sunblock, or cosmetic containing oxybenzone; which has been shown to be harmful to reef life systems. I respectfully ask that you move SB1150 forward. Mahalo, Jade Haughian

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 9:37 PM
To: CPCtestimony
Cc: klahaela@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Jennifer Kimiko LaHaela Walter	Individual	Support	No

Comments: Please support this bill! It is a great step in preserving our declining coral reefs. It will also give up and coming local reef-safe sunscreen businesses a well-deserved boost!

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The following information is being submitted with respect to supporting SB1150 SD2 HD2 Banning Oxybenzone Containing Products While on the Beach or in the Ocean

Short Version: Summary of Opposing Testimony/Rebuttal

The opposing testimony submitted by Hawaii Food Industry Association (HWIA), Retail Merchants of Hawaii (RMH), Chamber of Commerce Hawaii (CCH), Consumer Healthcare Products Association (CHPA), Personal Care Products Council (PCPC) and the American Chemistry Council (ACC) – all who have a share of the \$9 billion global sunscreen market - can be placed in 4 basic categories:

1- **Testimony:** Sunscreens are a safe and effective way to reduce skin cancer: **Rebuttal:** Since the inception of over-the-counter sunscreens in the late 1970's there has been a steady rise in basal and squamous cell carcinomas as well as melanoma. There are many exceptional programs that promote consumer awareness of the carcinogenic effects of the sun, however, despite these incredible efforts over the last 40 years, skin cancer has only increased in the population and only 24% of the population chooses to wear sunscreen daily.

2 - **Testimony:** Oxybenzone is an extremely effective UVA & UVB absorber. **Rebuttal:** Zinc Oxide has the best UV attenuation (290 – 400 nm) and peak absorption (290 – 385 nm) of all FDA actives, covering 100% of the UVB and 95% of the UVA spectrum. Oxybenzone, merely has a peak absorption at 290 – 300 nm and one at 325 – 340 nm.

3- **Testimony:** There is no “valid scientific testing” to prove that Oxybenzone is harmful. **Rebuttal:** Numerous research papers have been published (not all are referenced below), many in peer review journals by scientists living all over the world. Many of them measured Oxybenzone toxicity using a Lethal Dose 50 (LC50), which is a well accepted and commonly used acute toxicity indicator dating back to 1927.

4 - **Testimony:** Coral reef mortality & bleaching has nothing to do with Oxybenzone. **Rebuttal:** There is no doubt that coral bleaching and death are produced by numerous factors, however, accepting that 100% of the problem is caused by global climate change is inappropriate and unrealistic. There is absolutely evidence that prohibiting the use of Oxybenzone will improve the health of coral reefs, by minimizing a toxin from the water that inhibits coral reproduction and death to a variety of reef and aquatic life.

Long Version: Specific Objections by Group

1) Sunscreens are a safe and effective way to reduce skin cancer:

HWIA: “Sunscreen is a first line of defense for those seeking protection from the sun’s cancer causing UV rays. The combination of reduced choice and less effective products could have the dangerous consequence of individuals using less protective sunscreens or worse, no longer using sunscreen, thereby causing more skin damage and potentially increasing skin cancer rates.” **AND** “Over 5 million cases of non-melanoma skin cancer are treated” ... “Over the last 30 years, more people have experienced skin cancer than all other cancers combined.” **AND** “A higher standard of evidence must be met before the legislature bans products that provide a convenient way for individuals to wear sunscreen every day to prevent skin cancer.

RMH: “Consumers, both visitors and kama`aina will have very limited choices on sunscreen and products that are less effective and may cost more. We also run the risk of people no longer wearing sunscreen and thus increasing their chances of skin cancer. This ban would also penalize those who do not go to the beach but use sunscreen on a regular basis.”

CCH: “This FDA-approved and dermatologist recommended ingredient has been used commercially since 1980 to protect against skin damage and skin cancers, such as melanoma and squamous skin cell carcinoma.” **AND** “We oppose amending this bill to ban the sale of this cancer-preventing product.” **AND** “We oppose amending this bill to ban the sale of this cancer-preventing product.” **AND** “Sunscreen is the first line of defense for those seeking protection from the sun’s cancer causing UV rays. Given that Oxybenzone is found in an estimated 80 percent of sunscreens, banning its use in Hawaii will drastically reduce the selection of sunscreen products available to residents and visitors. The combination of reduced choice and less effective products could have the dangerous consequence of individuals using less protective sunscreens or worse, no longer using sunscreen, thereby causing more skin damage and potentially increasing skin cancer rates.” **AND** “A higher level of evidence must be obtained before the legislature bans products that provide a convenient way for individuals to wear sunscreen every day to prevent skin cancer. Oxybenzone is an extremely effective ingredient that rubs in clear and is contained in over 80 percent of consumers’ favorite choices of sunscreen.” **AND** “Over-the-counter sunscreen containing Oxybenzone are an affordable, accessible first line of defense for individuals seeking protection from the sun’s cancer causing

UV rays. Banning the use of Oxybenzone, an important UV filter ingredient, will drastically reduce the selection of sunscreen products available to Hawaii's residents and tourists. The combination of reduced choice and less effective products could have the dangerous consequence of individuals using less protective sunscreens or worse – not using sunscreen at all – thereby, causing more skin damage and potentially increasing skin cancer rates.”

CHPA: “ ... proposes to ban the use of sun protection products containing Oxybenzone, an ingredient approved by the U.S. Food and Drug Administration (FDA).” AND “Oxybenzone is a safe, and effective ingredient approved by the FDA in 1978 and found in nearly 2,000 personal care products on the market today, including some of the most popular sunscreens, lip balms, and lotions designed to guard against sun damage. AND “In fact, over the last 30 years, more people have experienced skin cancer than all other cancers combined.” AND “When used as directed, sunscreens containing Oxybenzone have proven to be very effective in protecting skin against the sun's harmful rays. The FDA has acknowledged research that shows sunscreens aid in decreasing the risk of developing skin cancers and early skin aging. The FDA recommends use of a broad spectrum sunscreen with SPF values of 15 or higher regularly and as directed to protect against UVA and UVB sun rays as provided by Oxybenzone sunscreen products. In addition, organizations including the American Cancer Society recommend the use of broad spectrum sunscreen products with at least SPF30. Broad-spectrum products with those SPF levels are necessary to appropriately protect a large portion of consumers spending time outdoors under conditions of moderate to high UV index, like when going to the beach. Oxybenzone is also a critical ingredient because it helps to stabilize other FDA-approved sun-filters when exposed to intense UV light. Without Oxybenzone, adequate sun protection may not be achieved.”

PCPC: “A state-specific restriction on the use of this product would put the citizens of Hawaii and tourists visiting the state at great risk. The U.S. Food and Drug Administration (FDA), the Centers for Disease Control and Prevention (CDC), the U.S. Surgeon General, the American Academy of Dermatology (AAD), the Skin Cancer Foundation and health care professionals worldwide emphasize that using sunscreens is a critical part of a safe sun regimen. The dangers of sun exposure are clear and universally recognized by public health professionals and dermatologists. The National Institutes of Health Report on Carcinogens identifies solar UV radiation as a ‘known human carcinogen.’ A single bad burn in childhood greatly increases the risk of developing skin cancer later in life.” AND “Oxybenzone is an FDA approved critical ingredient to the U.S. sunscreen market. It is a broad spectrum sunscreen, absorbing both UVA and UVB rays, that also photostabilizes other sunscreens to provide long lasting protection.” AND “Moreover, skin cancer is the most commonly diagnosed cancer in the United States. We fear this legislation will create confusion, put consumers' health at risk and potentially discourage the use of sunscreens — an important part of a safe sun regimen.”

ACC: “Safety is a top priority for our member companies and we believe that consumers deserve to have confidence that the products they buy are safe for their intended uses.” AND “In addition, the language in the bill may send a broad and unsubstantiated message to consumers that these products contain ingredients that could be detrimental to the environment, perhaps resulting in unintended health consequences. As has been noted in testimony provided by the Hawaii Food Industry Association and the Consumer Healthcare Products Association, skin cancer is the most common form of cancer and the Food and Drug Administration has acknowledged research that shows sunscreens aid in decreasing the risk of developing skin cancers and early skin aging. Caution should be taken to ensure consumers do not unnecessarily avoid products that can offer protection against both ultraviolet A (UVA) and ultraviolet B (UVB) rays that often contribute to skin cancer.”

Rebuttal:

a) The number of adults treated for skin cancers has increased from 3.4 million in 2002–2006 to 4.9 million in 2007–2011 (1). Correspondingly, the average annual total cost for managing skin cancer increased 126.2% from \$3.6 billion to \$8.1 billion.

b) The National Cancer Institute, consumer use data for adults aged 18 years or older between the years 2005 – 2015, reported that 70.8% of all adults practice one of three sun protective behaviors: (i) seeking shade and avoiding sun during peak hours; (ii) wearing protective clothing; and (iii) using sunscreen. Of the three methods, only 33.7% reported applying sunscreens, while 38.4% relied on clothing and 39.1% usually sought shade. This would mean that 23.9% (70.8% practice protection x 33.7% choose sunscreen) of the population actually use sunscreen to protect themselves from the sun (2).

c) With respect to dermatological recommendations and testing in humans, the American Contact Dermatitis Society sighted benzophenones as the “2014 Allergen of the Year” with Oxybenzone (Benzophenone-3) being the most frequent reactor (3); in 2010 the North American Contact Dermatitis Group (16) concluded Oxybenzone to be a contact allergen and in 2006 European Commission Health & Consumer Protection (17) called Oxybenzone a photo-allergen.

Summary: Since the inception of sunscreens almost 40 years ago, we have seen a significant increase in the rate of skin cancers; observed that less than 25% of people use sunscreens regularly; and know that Oxybenzone commonly causes (among other things) allergic and photo-allergic reactions in humans at a rate of at least 1% or 875,000 reactions (based on 25% of the US population – 350 M - use sunscreen x 1% reaction rate). Based on the data, one might conclude that sunscreens aren't the solution to skin cancer, but only a small part of minimizing the problem in which case we should take a closer look at how sunscreens accumulate in both our environment and body.

Similar trends have been noted globally ... in a 2013 an article called “Sunscreens, skin cancer and the Australian summer” (19) noted that “It's important to understand that sunscreen is a useful adjunct to other sun protection measures. Rather than being our first line of defence, it should be the last. Not only do we seldom use enough, but it's easily sweated off and rubbed off as we towel down or rub water from our eyes.” Conversely, a 2014 story reported on “Australia the first country in the world to see decline in skin cancer rates” (20) - “The evidence-based guide, called Sun, Skin and Health, uses Medicare data to show that between 2000 and 2011, there was a 2% reduction in skin cancer treatments in the 25 to 34-year-old age group and a 1% reduction in the 35-44 year-old age group. Again, it is necessary to understand what the cost is for using sunscreens ... is a 1% to 2% drop in treatable skin cancer rates worth having tons of sunscreen in our waters, our food chain, our bodies?”

2) Oxybenzone is an extremely effective UVA & UVB absorber:

HFIA: “Oxybenzone is an extremely effective ingredient that rubs in clear and is contained in over 80 percent of consumers' favorite everyday choices for sunscreen.” **AND** in previous letter(s) “The Food and Drug Administration (FDA) has approved 16 sunscreens, of which only 2 provide effective UVA protection.” **AND** In a verbal testimony it was claimed that Oxybenzone was the only effective UVA approved active.

CCH: “We contend that more research needs to be done prior to passing a law banning the use of Oxybenzone, a leading ingredient in sunscreen, which has been shown to protect against harmful UVA & UVB radiation.”

CHPA: “Moreover, such a prohibition will likely have adverse effects on the health of Hawaiian residents and visitors, who depend on products containing Oxybenzone for affordable high sun protection factor (SPF) protection against damaging sun rays.”

CHPA: “In fact, Oxybenzone offers broad spectrum protection against both ultraviolet A (UVA) and ultraviolet B (UVB) rays that often contribute to skin cancer.”

PCPC: “Oxybenzone based sunscreens are affordable daily use products that have excellent skin cancer prevention properties that cannot be easily attained using alternative ingredients.”

Rebuttal:

It is important to note that SPF testing (UVB) is conducted in 10 human subjects, as outlined in the FDA testing guidelines. However, broad spectrum (UVA) testing is an analytical method (in vitro) that measures if a product has a critical wavelength of at least 370 nm, which represents 90 percent of the total area under the curve in the UV region. Based on the FDA definition only Zinc Oxide, Titanium Dioxide, Avobenzone, Menthyl Anthranilate, Oxybenzone and Octocrylene would qualify out of all the approved actives noted in the sunscreen monograph (see table below). It is important to note that base on these classification criteria, Oxybenzone just makes the critical wavelength cutoff of at least 370 nm for UVA claims and would be tied for last place with Octocrylene in terms of broad spectrum performance.

FDA Monograph Sunscreen Actives Drug Label Name (INCI/Common Name)	Attenuation in NM	Peak Absorption
Octocrylene	290 - 370	305 - 325
Oxybenzone (Benzophenone-3)	290 - 370	290 - 300 & 325 - 340
Menthyl Anthranilate	290 - 380	340 - 350
Avobenzone (Butyl Methoxydibenzoylmethane)	290 - 390	355 - 370
Titanium Dioxide	290 - 400	290 - 320
Zinc Oxide	290 - 400	290 - 385

With respect to Oxybenzone being a “favorite choice” and having UVA & UVB protection, for those sunscreen users who have concerns and want the strongest UV protective against the sun, Zinc Oxide has the best UV attenuation (290 – 400 nm) and peak absorption (290 – 385 nm) of all actives, covering 100% of the UVB and 95% of the UVA spectrum. Zinc Oxide can be used individually or with other actives if UV protection above an SPF 30 is required for very sun sensitive individuals, and with the advent of micronized particles (100 nm or larger) product esthetics are excellent and promote usage.

Summary: Oxybenzone is an effective UVA & UVA absorber, however, it is not the most effective of the available actives and has a number of potential side effects associated with its use. Banning Oxybenzone could have profound benefits ... it might (1) cause people to become more educated, whereby, they understand that sunscreens are not the complete answer to avoiding skin cancer; (2) companies would have an opportunity to use more effective UVA actives yielding potentially better products and protection from the sun; and (3) possible better UV actives would be approved by FDA - based on human and environmental safety and efficacy, perhaps providing overall better product selection for consumers to use that may combat skin cancer more effectively.

3) There is no “valid scientific testing” to prove that Oxybenzone is harmful:

HWIA: “Some studies have reported that certain UV filters contained in sunscreens lotions and washed off by swimmers, could contribute to coral bleaching. Studies have shown that five weeks of chronic exposure to these UV filters at concentrations above those reported in natural sea waters, did not induce coral bleaching nor reduce the photosynthetic efficiency of the symbiotic micro-algae” (L’Oreal Abstract attached to testimony which doesn’t mention Oxybenzone?) **AND** “At a minimum we should wait for studies conducted in the open ocean to come back before further action is taken.” ... “Once more research is conducted in the natural environment we will have more evidence to make an informed decision. Please don’t rush into this extreme action without proper research. A higher bar must be met when dealing with cancer prevention.”

RMH: These studies should be conducted NOT in a controlled lab, but out in the actual natural environment to take into consideration currents, coastal runoff, sewage, pollution, climate changes, overfishing, coral predators to name a few.”

CCH: “At a minimum, we should wait for the results of studies conducted in the open ocean before further action is taken. Hawaii is the only state in the U.S. to introduce legislation on Oxybenzone. Once more research is conducted in the natural environment we will need more evidence to make an informed decision.”

CHPA: “Since there have been no studies published to date that scientifically prove any sunscreen active ingredient is a hazard to coral reefs, CHPA respectfully encourages the House Committee on Ocean, Marine Resources, & Hawaiian Affairs to oppose S.B. 1150 SD2. A greater standard of evidence must be considered before a product so valuable to people’s health is prohibited.”

PCPC: “Senate Bill 1150 is not based on proven science, but rather is based on a single laboratory experiment that lacks sufficient scientific evidence connecting a sunscreen ingredient to coral bleaching. Regulations and legislation should be based on validated methods, reproducible studies, and conducted by more than one independent lab. ... In addition, the data presented by Downs et al. (2015) raise questions over the validity and reliability of the study’s analytical and toxicological findings.” **AND** “Another study involving five weeks of chronic exposure to UV filters at concentrations above those reported in natural sea waters reported that sunscreens did not induce coral bleaching

nor reduce the photosynthetic efficiency of the symbiotic micro-algae. (L'Oreal Abstract attached to testimony, which doesn't mention Oxybenzone?). **AND** "Since this legislation is based on one, selectively chosen, laboratory experiment, it would seem appropriate to support further research, and not rush to judgement."

ACC: "Unfortunately, we are concerned with the current version of the bill that greatly expands the authority of DLNR to impose use restrictions on "other chemicals" that may be used in these types of products but provides no implementation direction, funding, or scientific criteria to guide the Department. Providing open-ended regulatory authority to the Department creates a challenging and uncertain environment for manufacturers and retailers."

Rebuttal: In 2008 Oxybenzone was first reported to produce coral toxicity (5). Further research in 2015 identified Oxybenzone as a phototoxicant, genotoxicant and a skeletal endocrine disruptor in coral. This article went on to calculate the Lethal Concentration 50 or LC50 (a well accepted and commonly used acute toxicity indicator dating back to 1927) for coral larvae and several different species of coral (6). Additionally, Oxybenzone LC50s have been published for other aquatic invertebrate and vertebrate species (7) and Oxybenzone has been reported to produce numerous adverse reactions in other aquatic and non-aquatic species (8 – 18). In contrast, the only scientific information on Oxybenzone presented by those in opposition to the bill, was an abstract conducted by industry (L'Oreal) which was not based on proven science as defined by the PCPC ... "based on validated methods, reproducible studies, and conducted by more than one independent lab."

A number of organizations (HWIA, RMH and CCH) mention testing Oxybenzone in a "natural environment" or "open waters". Toxicology is based on determining health issues in laboratories under control conditions as well as in genetically control species ... to question this would be to question every toxicological study that has ever been conducted that has averted numerous health issues and/or death to countless human lives. The thought of doing a study in a "real Hawaii marine environment" would mean one would have to actually contaminate the environment with large amounts of chemicals to see if an effect occurs. This could have numerous unintended consequences potentially producing more harm to the environment and aquatic/human life.

Summary: Numerous research papers have been published (not all are referenced below), many in peer review journals by scientists living all over the world.

4) Coral reef mortality & bleaching has nothing to do with Oxybenzone:

HWIA: "In other words, it allows DLNR to ban any ingredient without any process for how it is deemed "harmful". This is extremely dangerous and over reaching. Banning any product or ingredient without a very thorough look at the impact of such a ban can have disastrous consequences." **AND** "HFIA believes more research needs to be done prior to passing a law banning the use of sunscreen." **AND** "We believe a prohibition on sunscreen is extremely premature, given that scientists are still monitoring and assessing the effects of climate change on oceans and marine life and overwhelming evidence shows that global warming causes coral bleaching. Coral bleaching is occurring in areas with very little human interaction, thus very little sunscreen exposure. The body of evidence on coral bleaching does not support blaming coral bleaching on sunscreen." **AND** "... coral reefs are threatened by an increasing array of impacts – primarily from global climate change, unsustainable fishing and other factors. Increasing ocean temperature and acidification, overfishing, coastal development and pollution are well known stressors on coral reefs."

RMH: "More research needs to be done before we do a blanket ban on all Oxybenzone-based products. **AND** "Hawaii's retailers unquestionably support initiatives to preserve and protect our environment. However, the solution to the issue of Oxybenzone type based products is not in a total ban, but in education, and studies of the coral reefs in their natural environment as well as the effectiveness of non- Oxybenzone type based products.

CCH:

"We believe a prohibition on Oxybenzone is extremely premature, given that scientists are still monitoring and assessing the effects of climate change on oceans and marine life and most evidence shows that global warming causes coral bleaching. Coral bleaching is occurring in areas with very little human interaction, thus very little sunscreen exposure. The body of

evidence on coral bleaching does not support blaming coral bleaching on sunscreen.”

CHPA: “While our industry shares the legislature’s concern with the health of coral reefs, there is absolutely no evidence that prohibiting the use of Oxybenzone will improve the health of coral reefs.” **AND** “We believe the recent coral bleaching events are of great concern, and have noted that coral experts around the world are unanimous in the opinion that global climate change is the major factor affecting coral health” **AND** “The U.S. National Oceanic and Atmospheric Administration’s (NOAA) Coral Reef Conservation Program notes that in addition to global climate change, critical factors include unsustainable fishing practices, coastal development, agricultural run-off, nutrient enrichment, and pollution from industry and sewage. Craig Downs of the Haereticus Environmental Laboratory noted in an interview that “agriculture run-off and sewage are probably responsible for the historical collapse of coral reefs for the past 40 years.” **AND** “While many of the deleterious effects on coral reefs can be tied to human activity, there is no scientific evidence that under naturally-occurring environmental conditions, sunscreen ingredients are contributing to coral degradation. Terry Hughes, director of the Australian Research Council Centre of Excellence for Coral Reef Studies at James Cook University suggests that extrapolations asserting sunscreen is damaging the world’s coral “are a bit of a stretch. He continues, “the conclusion from the media is sunscreen is killing the world’s coral, and that’s laughable.” Coral bleaching events are happening all over the world, even in remote reefs with no local human interference.”

PCPC: “In a recent news article, Terry Hughes, Director of the Australian Research Council Centre of Excellence for Coral Reef Studies at James Cook University, suggests that extrapolations asserting sunscreen is damaging the world’s coral “are a bit of a stretch.” He continues, “the conclusion from the media is sunscreen is killing the world’s coral, and that’s laughable.” **AND** “The threat to the world’s coral reefs is a very serious concern. According to the U.S. National Oceanic and Atmospheric Administration’s (NOAA) Coral Reef Conservation Program, coral reefs are impacted by an increasing array of hazards — primarily from global climate change, ocean acidification, and unsustainable fishing practices. Climate change and ocean warming are the most notable culprits for reef bleaching. According to NOM, coral bleaching events have occurred as the world’s oceans temperatures have increased to the warmest levels recorded since measuring began in the late 19th century. **AND** “SB 1150, although well intended, lacks the necessary scientific evidence to demonstrate that this sunscreen ingredient is in any way responsible for coral bleaching.”

ACC: “Unfortunately, we are concerned with the current version of the bill that greatly expands the authority of DLNR to impose use restrictions on “other chemicals” that may be used in these types of products but provides no implementation direction, funding, or scientific criteria to guide the Department. Providing open-ended regulatory authority to the Department creates a challenging and uncertain environment for manufacturers and retailers”

Rebuttal: There is no doubt that coral death is produced by numerous factors; ranking them would appear to be somewhat inconsequential since regardless of what one dies from, one is still dead as well as removing one threat and not all still leaves the risk of death. Most would agree that global climate change is the main cause of coral bleaching; however, the existence of climate change itself is currently in question by the US administration and others in the population. Understanding that there is more than one cause to any problem, be it skin cancer or the common cold, minimizes preconceived notions which is critical finding any cure.

Oxybenzone, in addition to inhibiting coral reproduction and producing coral death, has also been demonstrated to be toxic to other forms of aquatic life. The chemical has been found to accumulate in white fish, rainbow trout, barb, chub, perch and mussels (8), wastewater treatment plants and chlorinated pools (7, 9, 10, 11), it can be commonly found in the urine of women (gravid and non-gravid), men and children from studies conducted in the United States, Puerto Rico, Demark and China (12, 13, 14, 15) and produces allergic (3, 16) photo-allergic (17) and urticaria (18) reactions in humans ... to think that global climate change could cause as many toxic reactions as Oxybenzone would indeed be laughable!

Summary: The answer to the concerns above ... more time is needed, more research is needed, it's premature to ban the ingredient ... etc., is simple! There are already ample studies published about Oxybenzone, again not all references are listed below, demonstrating a variety of potential adverse reactions. This chemical is already present in waters all over the globe, some in very populated areas like China or NY and in some completely remote areas like the Arctic Ocean (21) ... some are overwhelmed by tourist like the US Virgin Islands (6); what goes into

out waters either directly (swimming) or indirectly (showering) is not just in the water, but in aquatic life as well as our own bodies ... the longer we allow Oxybenzone to accumulate in the environment the greater the risk will be to all.

Mahalo,

Joe DiNardo

Joe DiNardo – Hawaiian Tourist

6920 Irish Creek Road

Vesuvius, Virginia 24483

1976 – 2013: CTFA/PCPC member working on various scientific committees/issues

1976 – 1993: Revlon-Almay, Inc.; Vice President of R&D and Corporate Vice President

1993 – 2013: Pharma Cosmetix Research, Executive Vice President and Chief Scientific Officer

2013 - Current: Scientist Emeritus

References:

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From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, March 28, 2017 8:33 PM
To: CPCtestimony
Cc: katc31999@gmail.com
Subject: *Submitted testimony for SB1150 on Mar 30, 2017 14:00PM*

SB1150

Submitted on: 3/28/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Kat Culina	Individual	Support	No

Comments:

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To: CPCtestimony
Cc: klvnchico@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Kelvin Chico	Individual	Support	No

Comments: I would like to give my support for this bill. I believe that it is important to protect our coral reefs and the ecosystem which they are an integral part of. There are many commercial alternatives available. It requires only a bit of education to be made available to locals and tourists alike in order for them to be informed of the importance of this issue. Mahalo.

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 12:54 PM
To: CPCtestimony
Cc: lorraineparis@msn.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Lorraine Garnier	Individual	Support	No

Comments: I am writing in support for SB 1150 RELATING TO PRESERVING CORAL REEFS. I am in full support of banning Sunscreen; Oxybenzone; that affects our Beaches and Ocean. I would like you to pass this so that it will Prohibit use and sale of nonprescription sunscreen, sunblock, or cosmetics containing oxybenzone or other chemicals deemed harmful to coral reefs by the Department of Land and Natural Resources within a marine life conservation district. Hawaii is dependent on its coral reefs to sustain our beauty, accessibility for tourism and locals alike and to preserve the fate or future of Hawaii as a whole. This is a do or die for Hawaii Nei. Please pass this without any more hesitations. Mahalo Nui, Lorraine Garnier, Pacific Center for Environmental Studies, Kaneohe, HI

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Sent: Wednesday, March 29, 2017 1:33 PM
To: CPCtestimony
Cc: Marielleleeds@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Marielle Leeds	Individual	Comments Only	No

Comments: My name is Marielle Leeds (marielleleeds@gmail.com) and I live on the North Shore of Oahu, directly affected by this proposed Bill to ban the sunscreens using the ingredient Oxybenzone. My mailing address is General Delivery, Haleiwa, HI 96712 and I support this Senate Bill 1150. I have been an ocean activist my entire life, living in coastal beach towns and I have seen the oily films of lotion in high tourist areas as well as noticed the degradation of our reef systems. There is ample science to support this Bill, but better yet, it follows The Spirit of Aloha. Sincetely, Marielle Leeds, Sunset Beach, Oahu.

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Cc: bob-marion@hawaiiantel.net
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Marion McHenry	Individual	Support	No

Comments: This is an important bill. I strongly support passage of this bill.

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Cc: marsha.lowery@gmail.com
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SB1150

Submitted on: 3/28/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Marsha Lowery ND	Individual	Support	No

Comments: Please consider the following ammendments: the state is required to post educational signs at major airports, state and county beach parks.

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SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Merle Hayward	Individual	Support	No

Comments:

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SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Michelle Benedict	Individual	Support	No

Comments: Well documented and in line with maintaining the health and well being of the Hawaiian Islands marine environment. Please pass this measure.

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Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/28/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Micki Stash	Individual	Support	No

Comments: March 28, 2017 Committee on Consumer Protection & Commerce Rep. Roy M. Takumi, Chair RE: SB 1150, SD2, HD2 Relating to Preserving Coral Reefs Dear Chair Takumi and Committee Members: I am a long time docent at Hanauma Bay Nature Preserve and a member of the Friends of Hanauma Bay, as well as an avid scuba diver and past scuba instructor. I wholeheartedly urge this Committee to pass SB1150 SD2, H2 to restrict oxybenzone sunscreen use in Nature Preserves and Marine Life Conservation Districts and sales of oxybenzone sunscreens at concessions serving nature preserves like Hanauma Bay and other MLPAs. As you are aware, there have been many studies showing the negative impact sunscreens containing oxybenzone are having on our reefs. Our coral reefs are in serious decline as a result of many stressors including use of sunscreens containing oxybenzone. We need to protect our reefs now before it is too late. We should join the other forward thinking countries who already have put restrictions into place. Our reefs not only support life in Hawaii but add to the state's economy. There are alternative products that can be used for UV protection that will not have a devastating impact on our reefs and nearshore waters. In fact, we should have a total ban on the statewide sale of any products containing oxybenzone. Such a ban would not only reduce the use of such products but make enforcement much easier. Mahalo.

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 6:57 AM
To: CPCtestimony
Cc: 808nateyuen@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Nathan Yuen	Individual	Support	No

Comments: I strongly support SB1150 SD2 HD2 which prohibits the use and sale of nonprescription sunscreen, sunblock, or cosmetics containing oxybenzone or other chemicals deemed harmful to coral reefs. Hawaii depends on its coral reefs to protect the beaches and coastlines from erosion. So much of our economy is tied to the health of the ocean and our coastal areas. Do not enable the chemical industry to profit at the expense of our coral reefs. Our future as an island state is too fragile. I urge you to pass SB1150 SD2 HD2 to protect Hawaii's future.

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From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, March 28, 2017 10:00 PM
To: CPCtestimony
Cc: noelopes4625@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/28/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
noe lopes	Individual	Support	No

Comments: I support SP 1150 for the fact that sunblock Will slowly desecrate our coral and Reefs. please support this bill and do the right thing. SAVE OUR REEFS!!

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March 29, 2017

Honorable Representatives:

A few days ago, Dr. Robert Richmond, Research Professor and Director of Kewalo Marine Laboratory at UH Manoa was interviewed on the TV program, Hawaii is my Main Land (ThinkTech). I was very impressed by the fact that he brought his expertise to bear, answering the questions that have been raised regarding the science, suitability of legislation, and impacts on consumer health which some people have voiced regarding legislative bill SB1150 SD2 HD2.

This short video answers questions from an expert in the field of coral reefs, marine biology, and with a scientist's objectivity. Please take a few minutes to hear this educational information prior to taking action on SB1150 SD2 HD2 on March 30, 2017. Dr. Richmond and Kai Lucas have approved use of the video for informational purposes.

Here's the link

[Dr. Robert Richmond Interview about Oxybenzone Legislation for Hawaii](#)

Sincerely,

Pat B. Lindquist

Owner at Napili Shores, Lahaina, HI 96761

Mobile: 650-303-3150

P Please consider the environment before printing this e-mail.

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 8:12 AM
To: CPCtestimony
Cc: patriciablair@msn.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Patricia Blair	Individual	Support	No

Comments: All businesses should be held accountable for selling toxic sunscreens to the ocean and the body.

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From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 9:38 PM
To: CPCtestimony
Cc: p.lahaela.walter@posteo.org
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Philipp LaHaela Walter	Individual	Comments Only	No

Comments: Dear Committee Members, Please pass this crucial bill for the protection of our reefs. Considering how important the beauty of our aquatic areas are for tourism this should be a no-brainer. Thanks for your consideration!

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From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, March 28, 2017 8:44 PM
To: CPCtestimony
Cc: rfurst808@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/28/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Richard Furst	Individual	Support	No

Comments: It is of utmost importance that we protect our invaluable ocean resources, including the reefs that surround our islands. Without these corals, our near-shore marine ecosystems would collapse. I urge you to pass SB1150 with a full ban on all sunscreens and cosmetic products containing oxybenzene. Mahalo.

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UNIVERSITY OF HAWAI'I AT MANOA

Kewalo Marine Laboratory
Pacific Biosciences Research Center
41 Ahui Street, Honolulu, HI 96813

March 20, 2017

Rep. Roy M. Takumi, Chair
Committee on Consumer Protection and Commerce
State of Hawai'i House of Representatives, The Twenty-ninth Legislature

Dear Chairman Takumi and Committee Members,

I am writing in support of Bill SB1150 SD2, HD2 (HSCR 1343): "Relating to Preserving Coral Reefs." I am a coral reef scientist employed at the University of Hawaii at Manoa, a past president of the International Society for Reef Studies and served as the convener for the 13th International Coral Reef Symposium (ICRS) that was held at the Hawaii Convention Center in June, 2016. I have been actively engaged in coral reef research for the past 43 years.

Coral reefs throughout the world, including in Hawaii, are in serious decline as a result of coastal pollution, overfishing and the impacts of global climate change. These spectacular ecosystems support over 500 million people world-wide through their economic, cultural and ecological values and services. Hawaii's reefs alone are valued at \$34 billion with an annual contribution to the State's economy of over \$360 million. It's very clear, that whatever we do that is good for corals is also good for people, here and around the world.

The key consensus from the over 2,500 participants attending the 13th ICRS was that coral reefs are severely threatened but not doomed. The future of coral reefs and those who depend on them is tied to the development and implementation of sound, scientifically-based policies and practices. Climate change, an overriding problem, will take time and international cooperation to address. In order to buy time, we must address local stressors now, including coastal water quality. Removing oxybenzone exposure to corals is a sound step forward here in Hawaii and other jurisdictions where it is a documented problem.

The research performed by Dr. Craig Downs and his colleagues has demonstrated the negative effects of oxybenzone on corals, their ability to successfully reproduce and for their larvae to settle and grow on our reefs. They have also provided data to show that levels of oxybenzone from sunscreens are at levels that are negatively affecting our reefs. Hence, legislation that removes this stressor is science-based and appropriate policy, and I strongly support the proposed ban on oxybenzone based sunscreens in Hawaii. I would also suggest the language that prohibits the sale of these products in Hawaii, as that is a more appropriate means for addressing the problem without putting local residents and tourists in jeopardy for not knowing the law and hence, purchasing the problematic products here.

Protection against uv exposure can be achieved in a variety of ways that are far better for our reefs (and people) such as the use of rash guards and other uv blocking water wear, and sunblocks with non-nanotized and coated zinc oxide and titanium dioxide that are widely available. I thank the members of the Hawaii Legislature for taking this wise approach to helping our reefs at a time when they need all of the help we can provide.

Respectfully,


Robert H. Richmond, Ph.D.
Research Professor and Director

Written Statement of
Robin Van Niekerk

Final Committee Hearing for SB1150 SD2 HD2 scheduled for CPC
Thursday 3-30-17
2PM
Hawai'i State Capitol, Conference Room 329

IN SUPPORT OF:

SB1150 SD2 HD2 RELATING TO PRESERVING CORAL REEFS.
Report Title: Sunscreen; Oxybenzone; Beaches; Ocean
Description: Prohibits use and sale of nonprescription sunscreen, sunblock, or
cosmetics containing oxybenzone or other chemicals deemed harmful to
coral reefs by the Department of Land and Natural Resources within a
marine life conservation district. Requires commercial permittees to
inform all customers of the prohibition. Authorizes Department of Land
and Natural Resources to propose rules for other areas to conserve state
marine resources. (SB1150 HD2)

To: Rep Roy Takumi, Chair, CPC, Members of the Committee
Re: **Testimony in STRONG SUPPORT of SB1150 SD2 HD2**

Aloha Honorable Chair and Committee Members:

Thank you for the opportunity to testify in **strong support** of SB1150 SD2 HD2. Please help protect our precious coral reefs by passing this bill and consider opening it up for a larger state-wide ban. Hawaii's economy and beautiful shoreline depend on the survival of coral reefs. There is a reason that these chemicals are banned in Europe and Japan! Chemical sunscreens are decimating coral reefs and weakening their ability to mitigate the effects of climate change. The culprits are oxybenzone and about 10 other chemicals. Scientists believe coral is damaged when oxybenzone exceeds a concentration of 62 parts per trillion, which is roughly equivalent to one drop of water in 6.5 Olympic-sized swimming pools. Scientists have found concentrations of 2,000 parts per million in Hawaii. The oxybenzone causes the coral to bleach at temperatures several degrees cooler and inhibits its ability to reproduce. Seawater testing discovered concentrations of oxybenzone were 12 times higher in Hawaii than the average because of so many people enjoying Hawaii's beaches and ocean.

There are ample alternative reef-safe sunscreens that do not contain oxybenzone and do protect your skin from UV rays, such as zinc sunscreens, which provide broad spectrum protection from UVA and UVB rays and do not harm people or the environment.

Please Ban these toxic sunscreens and help SAVE THE REEFS!!! Mahalo!

Thank you for this opportunity to testify.
[Robin Van Niekerk](mailto:Robin.Van.Niekerk)
Robin_van_niekerk@hotmail.com

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, March 29, 2017 9:30 AM
To: CPCtestimony
Cc: shannonkona@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/29/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Shannon Rudolph	Individual	Support	No

Comments: STRONGLY SUPPORT

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From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, March 28, 2017 4:41 PM
To: CPCtestimony
Cc: gifts9954@gmail.com
Subject: *Submitted testimony for SB1150 on Mar 30, 2017 14:00PM*

SB1150

Submitted on: 3/28/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Susan Vickery	Individual	Support	No

Comments:

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Sent: Thursday, March 30, 2017 6:41 AM
To: CPCtestimony
Cc: tampaltin@gmail.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/30/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Tamara Paltin	Individual	Support	No

Comments: I am in strong support of this very scaled back version of this oxybenzone/avobenzone ban. It has been scientifically proven that these ingredients are harmful to humans and to our reefs which are experiencing significant decline. Our marine environment is an important economic driver for this State and needs to be protected as such. There are safe and economically feasible alternatives. Please act in the best interest of the people and not money and corporations

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Written Statement of
Tatyana Cerullo

Final Committee Hearing for SB1150 SD2 HD2 scheduled for CPC
Thursday 3-30-17
2PM
Hawai'i State Capitol, Conference Room 329

IN SUPPORT OF:

SB1150 SD2 HD2 RELATING TO PRESERVING CORAL REEFS.
Report Title: Sunscreen; Oxybenzone; Beaches; Ocean
Description: Prohibits use and sale of nonprescription sunscreen, sunblock, or
cosmetics containing oxybenzone or other chemicals deemed harmful to
coral reefs by the Department of Land and Natural Resources within a
marine life conservation district. Requires commercial permittees to
inform all customers of the prohibition. Authorizes Department of Land
and Natural Resources to propose rules for other areas to conserve state
marine resources. (SB1150 HD2)

To: Rep Roy Takumi, Chair, CPC, Members of the Committee
Re: **Testimony in STRONG SUPPORT of SB1150 SD2 HD2**

Aloha Honorable Chair and Committee Members:

Thank you for the opportunity to testify in **strong support** of SB1150 SD2 HD2. Please help protect our precious coral reefs by passing this bill and consider opening it up for a larger state-wide ban. Hawaii's recreational economy and valuable shoreline depend on the survival of coral reefs. Chemical sunscreens are decimating coral reefs and weakening their ability to mitigate the effects of climate change. The culprits are oxybenzone and about 10 other chemicals. Scientists believe coral is damaged when oxybenzone exceeds a concentration of 62 parts per trillion, which is roughly equivalent to one drop of water in 6.5 Olympic-sized swimming pools. Scientists have found concentrations of 2,000 parts per million in Hawaii. The oxybenzone causes the coral to bleach at temperatures several degrees cooler and inhibits its ability to reproduce. Seawater testing discovered concentrations of oxybenzone were 12 times higher in Hawaii than the average because of so many people enjoying Hawaii's beaches and ocean.

There are ample alternative reef-safe sunscreens that do not contain oxybenzone and do protect your skin from UV rays, such as zinc sunscreens, which provide broad spectrum protection from UVA and UVB rays and do not harm people or the environment.

Please SAVE THE REEFS!!! Mahalo!

Thank you for this opportunity to testify.
TATYANA CERULLO
tatyana.cerullo@gmail.com
808-722-6816

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, March 28, 2017 9:37 PM
To: CPCtestimony
Cc: tbohl8@yahoo.com
Subject: Submitted testimony for SB1150 on Mar 30, 2017 14:00PM

SB1150

Submitted on: 3/28/2017

Testimony for CPC on Mar 30, 2017 14:00PM in Conference Room 329

Submitted By	Organization	Testifier Position	Present at Hearing
Ted Bohlen	Individual	Support	No

Comments: Please protect precious coral reefs by passing this bill, which has reasonable though limited restrictions on the sale and use of sunscreens containing oxybenzone in especially sensitive coral reef areas. Several scientific studies indicate corals are stressed by several factors, including oxybenzone sunscreens, and that even very small amounts of oxybenzone are toxic to corals and may harm human health by disrupting our hormones. Please follow the precautionary principle now by acting to protect public trust natural resources on which our economy and valuable island shorelines depend. Reefs will die in our lifetime if we don't act now to protect them! There are ample alternative reef-safe sunscreens that can protect our skin without killing reefs. Please pass SB1150 SD2 HD2, which takes reasonable initial steps by: 1) restricting use of sunscreens containing oxybenzone in nature preserves and Marine Life Conservation Districts and their sale at county concessions serving such areas; 2) requiring permittees running tours in such areas to notify customers that oxybenzone sunscreens are prohibited in those areas; and 3) authorizing DLNR to propose rules wherever needed to protect other areas. Mahalo!

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March 29th, 2017

To Whom It May Concern:

In 2014, I had the great fortune of working on O'ahu and enjoying some of the reefs around the island. I remember going to Haunama Bay and watching countless individuals spray on sunscreen- just to watch it wash off and taint the waters as soon as they entered the Bay.

Many letters will undoubtedly focus on the economic benefits of protecting reefs as well as public health by banning oxybenzone containing sunscreens or cosmetics. Some may wonder if it is realistic to have people convert to using more reef friendly sunscreens- a change that I actually think will be received well. Given that SB 1150 only prohibits the use of oxybenzone containing sunscreens or cosmetics in 'Marine Life Conservation Districts', it is a very small and reasonable ask that the public make this change in their sunscreen application habits. People who visit these districts tend to do so because they consider them to be beautiful and want to preserve them to the best of their abilities. Once people become educated on the negative effects of oxybenzones to public health and marine life they will likely be in strong support of SB 1150.

This is a wonderful opportunity for the State of Hawai'i to show leadership in protecting and preserving marine conservation districts. This effort will make the reefs even more valuable and enjoyable for the public. It is a strong and bold stance that I encourage the State to take.

I am in support of SB 1150, SD2, HD2 which prohibits the use and sale of nonprescription sunscreens, sunblocks, or cosmetics containing oxybenzones or other chemicals deemed harmful to coral reefs by the Department of Land and Natural Resources within marine life conservation districts.

Sincerely,

Tessa Verhoef

San Francisco, CA

March 29, 2017

To: Honorable Representative Roy Takumi, Chair, CPC

Testimony in SUPPORT SB1150, SD2, HD2

Hearing Date 3-30-17; Conference Room 329; 2PM



There are solid studies that show oxybenzone sunscreens can harm our health, negatively affect sea life and destroy our coral reefs. We can no longer ignore the reality we are witnessing in our coastal waters. The reefs are dying, the waters are polluted, the sea life is contaminated by these chemicals. **There are many stressors effecting corals, but oxybenzone is one we can remove now!**

Our near-shore reefs equate to hundreds of millions directly to our local economy. Their failure could be an economic disaster in our not-so-distant future. Parts of the Caribbean wish they'd banned oxybenzone and other hormone disruptors much sooner. **Marine reserves in Mexico, realizing the problem, banned the sale, use and even confiscates sunscreens that contain any of the hormone disruptors on the DLNR list of ingredients not to use.** How has Mexico figured this out over a decade ago and we are just now debating the issue?

If we don't change our ways, have we calculated how much the necessary restoration will eventually cost? Will it even be possible? **Many costal restoration programs (particularly in Florida) are learning you can't restore if the cause is still in effect! Restoration in oxybenzone-filled waters, for corals, sea urchin, is just not possible.** Their DNA is damaged, the sperm count is zero.

Many (particularly marine scientists) have admitted to me they've stopped eating local fish because they know they're filled with these sunscreen chemicals (they've done the testing!). What will this reality eventually do to local restaurants? How is this damaging our fisheries? People already complain there's no more fish when they swim / snorkle. Boats are going out further, and taking visitors lathered in sunscreen at reefs with any sign of life... until those start failing as well.

This issue is getting attention globally and people are looking at Hawaii to make a stand. We need to ban sales of oxybenzone and restrict use *at minimum* in marine conservation districts. If we were able to figure out a plastic bag ban, we can figure out the logistics for oxybenzone. If we can ban smoking on the beach, we can ban toxic chemical use at the beach.

Corporate chemical sunscreen brands have known for years this day was coming, most have oxybenzone-free formulas. And of course, **there are many quality, efficient sunscreens that contain no toxic chemicals or endocrine disruptors in the first place (our web site lists many!).** They don't come in the form of atomized chemical sprays, which greatly effect the quality of life – the air we breathe – for everyone who enjoys the beach. They dont come off the second you enter the water. They're not filled with UV filters that get absorbed into the skin, and pissed out, and make their way into the ocean even if you never get in the water.

We appreciate your efforts to represent the people of Hawai'i and in doing so will vote YES on SB1150 SD2 / HD2 to restrict use and expand this to properly ban sale of oxybenzone sunscreen statewide.

Mahalo!

Wil McClaren

Ban Toxic Sunscreens Hawaii

bantoxicsunscreens.com • facebook.com/BanToxicSunscreens