



STATE OF HAWAII  
DEPARTMENT OF HEALTH

P. O. Box 3378  
Honolulu, HI 96801-3378  
doh.testimony@doh.hawaii.gov

**Testimony COMMENTING on HB2248  
RELATING TO PRODUCTS CONTAINING SUN PROTECTION FACTOR  
INGREDIENTS**

REPRESENTATIVE JOHN MIZUNO, CHAIR  
HOUSE COMMITTEE ON HEALTH

Hearing Date: 2/4/2020

Room Number: 329

1 **Fiscal Implications:** This measure may impact the priorities identified in the Governor's  
2 Executive Budget Request for the Department of Health's (Department) appropriations and  
3 personnel priorities.

4 **Department Testimony:** HB2248 seeks to amend HRS 328 and HRS 342D to require that  
5 sunscreens sold or distributed in Hawaii only contain active ingredients classified by the United  
6 States Food and Drug Administration (FDA) as Category 1: *Generally Recognized as Safe and*  
7 *Effective*. The Department has the following comments.

8 The Department recognizes the benefits of the 2018 legislation prohibiting the sale of  
9 oxybenzone and octinoxate containing sunscreen products and shares the concerns about the  
10 potential impacts of some sunscreen chemicals on coral reefs and human health. It is heartening  
11 to see the dramatic increase in availability, variety and consumer acceptance of local and  
12 national brand oxybenzone and octinoxate-free options and mineral sunscreen products that have  
13 entered the marketplace in the past two years. Use of these products meets standards for public  
14 health protection and offers the public a concrete choice to help protect Hawaii's coral reefs and  
15 marine environment when enjoying our beaches.

16 However, the risk of skin cancer from sun exposure remains a hazard for the people of Hawaii  
17 and visitors and it is imperative that the public health consequences of additional prohibition on  
18 sunscreen ingredients are considered.

1 Currently, the only FDA Category 1 active ingredients in sunscreens are zinc oxide and titanium  
2 dioxide, both of which are mineral sunscreens. Of the remaining fourteen approved ingredients,  
3 twelve are classified as Category 3 – *insufficient evidence to determine if they are safe and*  
4 *effective* and two are Category 2 – *Not safe or effective*.

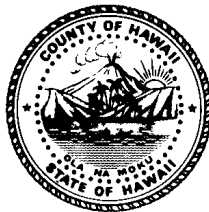
5 Restricting the sale and distribution of sunscreens to only two approved active ingredients has  
6 the potential to increase the risk of skin cancer to Hawaii residents and visitors. This is  
7 particularly pertinent to certain individuals who have skin sensitivity or allergy to mineral  
8 sunscreens. While the language describing Category 3 - *insufficient evidence to determine if they*  
9 *are safe and effective* may sound alarming, it reflects lack of data, not evidence that they are  
10 harmful. In fact, many commonly used over-the-counter products rely on Category 3  
11 medications, such as aspirin, some antacids, dandruff shampoos and cough medicines among  
12 many others. The Department is not aware of any states or jurisdictions that have passed  
13 legislation using FDA Category 3 status as justification for banning or restricting medications or  
14 personal care products.

15 The Department supports FDA efforts to evaluate the safety and effectiveness of  
16 over-the-counter medications including sunscreens and encourages further study of these  
17 chemicals. At this time, the risk of greatly restricting available sunscreen options in Hawaii  
18 outweighs the potential benefits.

19 **Offered Amendments:** None

20 Thank you for the opportunity to testify on this measure.

REBECCA VILLEGAS  
Council Member  
District 7, Central Kona



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EMAIL: [Rebecca.villegas@hawaiicounty.gov](mailto:Rebecca.villegas@hawaiicounty.gov)

## HAWAI'I COUNTY COUNCIL

*West Hawai'i Civic Center, Bldg. A  
74-5044 Ane Keohokalole Hwy.  
Kailua-Kona, Hawai'i 96740*

January 31, 2020

TESTIMONY OF REBECCA VILLEGAS  
COUNCIL MEMBER, HAWAI'I COUNTY COUNCIL  
ON HB 2248, RELATING TO PRODUCTS CONTAINING SUN PROTECTION FACTOR  
INGREDIENTS.

Committee on Health  
Tuesday, February 4, 2020  
10:30 a.m.  
Conference Room 329

Aloha Chair Mizuno, and Members of the Committee:

I thank you for the opportunity to testify in support of HB 2248, relating to the products containing sun protection factor ingredients. My testimony is submitted in my individual capacity as a member of the Hawai'i County Council and Chair of the Hawai'i County Council Public Safety Committee.

The purpose of this measure is require that only sunscreen products that contain active ingredients classified by the U.S. Food and Drug Administration as a category I, generally recognized as safe and effective ingredients, shall be sold, offered for sale, or distributed for sale in the State. A number of sunscreens have recently demonstrated to pose intolerable toxicologic threats such as; environmental contamination in coastal waters, harmful impacts on Hawai'i's marine environment, coral reefs, and other residing ecosystems, increases the risk of breast cancer, birth defects, developmental disorders in children, and other issues. The State in the interest to preserve our marine ecosystem has banned sunscreen that contain oxybenzone or octinoxate through the enactment of Act 105, session laws of Hawai'i 2018. Additional action must be taken to prevent any potential harmful impacts of sunscreens containing ingredients other than what is listed as category I.

For the reasons stated above I urge the Committee on Health to support this measure as well. Should you have any questions, please feel free to contact me at (808) 323-4267.

Mahalo for your consideration.

  
Rebecca Villegas  
Council Member, Hawai'i County Council

**HB-2248**

Submitted on: 1/31/2020 9:43:43 AM

Testimony for HLT on 2/4/2020 10:30:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Alexandra Kahn	Surfrider Oahu	Support	No

Comments:



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#### Executive Officers

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**Derek Kurisu**, KTA Superstores, *Advisor*  
**Beau Oshiro**, C&S Wholesale Grocers, *Advisor*  
**Toby Taniguchi**, KTA Superstores, *Advisor*

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TO:  
Committee on Health  
Rep. John M. Mizuno, Chair  
Rep. Bertrand Kobayashi, Vice Chair

FROM: HAWAII FOOD INDUSTRY ASSOCIATION  
Lauren Zirbel, Executive Director

DATE: February 4, 2020  
TIME: 10:30am  
PLACE: Conference Room 329

RE: HB2248 Relating to Products Containing Sun Protection Factor Ingredients

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.

HFIA is opposed to this measure, which disadvantages local retailers and benefits mainland and online retailers. This bill dramatically limits the number of desirable sunscreen products available for sale by local businesses. Internet sales of these same products will likely continue as it is very difficult to enforce this law for items sold online.

This ban would impact a number of products that are used to prevent skin cancer, we believe that a higher standard of review is necessary before banning products that many Hawaii residents rely on to prevent cancer.

The FDA's proposed rules regarding the GRASE status of sunscreen ingredients is not a ban. Per FDA Commissioner Scott Gottlieb, M.D. "The proposal we've put forward would improve quality, safety and efficacy of the sunscreens Americans use every day. We will continue to work with industry, consumers and public health stakeholders to ensure that we're striking the right balance."<sup>1</sup>

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<sup>1</sup> FDA News Release, FDA Advances New Proposed Regulation to Make Sure That Sunscreens Are Safe and Effective  
<https://www.fda.gov/news-events/press-announcements/fda-advances-new-proposed-regulation-make-sure-sunscreens-are-safe-and-effective>

The FDA's press release on the proposed rule also quotes Janet Woodcock, M.D., director of the FDA's Center for Drug Evaluation and Research as saying, "It is important that, as this rulemaking effort moves forward and the FDA gathers additional scientific information, given the recognized public health benefits of sunscreen use, consumers continue to use sunscreen in conjunction with other sun-protection measures."

We understand that there are some mineral sunscreens available that contain only the mineral ingredients currently classified as GRASE however, the classification for these ingredients could also change with better testing. Consumer Reports has noted, "Mineral sunscreen have consistently underperformed in CR's testing, not always testing at the claimed SPF label on the package and failing to provide adequate protection from either UVA or UVB rays. None of the 18 sunscreens in our current ratings that contain only titanium dioxide, zinc oxide, or both scored high enough to receive a recommended designation from CR."<sup>2</sup>

**If this measure is passed before the FDA has a chance to gather information and update GRASE status of sunscreen ingredients it can send a confusing and potentially dangerous message to consumers about these products.**

There are also still questions about which ingredients are safest for the environment. In April 2019 Civil Beat reported, "The new research introduces the possibility that titanium dioxide sunscreen is not as safe for ocean life and human health as previously thought."<sup>3</sup> **Researcher Craig Downs, who was a leading proponent of the oxybenzone ban, is now stating that only expensive sunscreen is acceptable.**<sup>4</sup>

**The head of science for the Great Barrier Reef Marine Park Authority is not supporting calls to ban people from using potentially damaging sunscreens on the Reef.** Amid calls for a crackdown on the products in Queensland, the acting Chief Scientist for the Great Barrier Reef Marine Park Authority (GBRMPA) said currently, the health benefits are outweighing any reef risks. "There's ample evidence oxybenzone plays a role in human health, so protecting us from DNA damage and the risks of skin cancer," Dr James Kerry told the ABC. **"The science behind the impact of the products on corals is not well established at all.** The only studies that have established any link to damage to corals have been done in a lab and they haven't replicated the conditions on the reef. They've been done these in confined spaces, in tanks, and if you treat coral that way it tends to get stressed. When we look for concentration of these chemicals out on the reef we're finding very, very low concentrations." Dr Kerry said people who are concerned about the health of the reef would be far better off reducing their carbon footprint. **"This issue of sunscreen is a distraction from what we really need to focus on the reef, which is climate change," he said.**

Hawaii has high rates of skin cancer and we don't believe there is enough evidence to warrant additional bans on functional products.

Thank you for the opportunity to testify.

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<sup>2</sup> <https://www.consumerreports.org/sunscreens/what-you-need-to-know-about-sunscreen-ingredients/>

<sup>3</sup> <https://www.civilbeat.org/2019/08/some-reef-safe-sunscreens-may-not-be-safe-after-all/>

<sup>4</sup> <https://www.civilbeat.org/2019/08/some-reef-safe-sunscreens-may-not-be-safe-after-all/>



**HB-2248**

Submitted on: 2/2/2020 3:28:12 PM

Testimony for HLT on 2/4/2020 10:30:00 AM

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

Comments:

From: Friends of Hanauma Bay

To: House Committee on Health

Representative John M. Mizuno, Chair

Rep. Bertrand Kobayashi, Vice Chair

Re: HB2248 Relating To Products Containing Sun Protection Factor Ingredients

Hearing: Tuesday, February 4, 2020 10:30 a.m. Conference Room 329

Position: **STRONGLY SUPPORT**, and recommending an amendment to change the implementation date to 1 January 2021 to coincide with Act 104, Session Laws of Hawaii 2018.

Aloha Chair Mizuno, Vice Chair Kobayashi, and Committee Members,

Mahalo for the opportunity to testify. Friends of Hanauma Bay strongly supports this important bipartisan bill.

Sun Protection Factor (SPF) ingredients are drugs regulated by the FDA and comprise a \$10B a year industry in the United States.

For many years, the FDA has allowed 16 sunscreen monograph active ingredients to be sold over the counter (OTC):

1. the mineral sunscreens zinc oxide and titanium dioxide; and
2. the chemical sunscreens aminobenzoic acid (PABA), trolamine salicylate, cinoxate, dioxybenzone, ensulizole, homosalate, meradimate, octinoxate, octisalate, octocrylene, padimate O, sulisobenzone, oxybenzone, and avobenzone.



However, chemical sunscreens are endocrine disruptors. Numerous independent scientific studies over the years continue to demonstrate significant linkages between them and serious human health issues including breast cancer, endometriosis, reduced sperm viability and other reproductive disorders, Hirschsprung's deformity in newborns, developmental disorders, learning problems, and immune system dysfunction.

Further, these chemicals can adversely affect all living things with endocrine receptors. Numerous studies over the last 20 years have documented similar toxic effects on corals, fish, and other marine life, leading to the enactment of Act 104, Session Laws of Hawaii 2018.

These linkages to public health problems are so serious that for the first time in its history, the FDA re-opened the sunscreen monograph for updates. In 2019, the FDA announced that its final draft on the updated sunscreen monograph states the following:

1. The mineral sunscreens (zinc oxide and titanium dioxide) are Generally Recognized as Safe and Effective (GRASE) for human use.
2. The chemical sunscreens aminobenzoic acid (PABA) and trolamine salicylate are NOT GRASE.
3. There is not sufficient data on the remaining 12 chemical sunscreens for the FDA to determine they are safe for human use.

In the interest of promoting the health of Hawaii's residents, Hawaii's near shore marine environment, and the health of over 10 million visitors that visit our State, HB2248 supports the FDA's findings and proposes that only sunscreens the FDA determines are safe and effective for human use are sold in Hawaii starting in 2023.

Manufacturers are responsible for providing the FDA with scientific data supporting the safety and efficacy of their products. After 40 years, the chemical sunscreen companies have failed to do so.

Why should Hawaii continue to allow their sale in our State?

Friends of Hanauma Bay supports HB2248, and recommends advancing the effective date to January 2021 to coincide with Act 104, Session Laws of Hawaii 2018.

Respectfully,

Lisa Bishop

President

Friends of Hanauma Bay



**LATE**



February 3, 2020

Representative John M. Mizuno, Chair  
Representative Bertrand Kobayashi, Vice Chair  
Committee on Health  
State Capitol  
415 South Beretania Street  
Honolulu, HI 96813

Chair Mizuno and Vice Chair Kobayashi:

As a coalition of health, wellness and business organizations we respectfully request that you oppose HB 2248.

HB 2248 would require that as of January 1, 2023, only sunscreen products that contain active ingredients classified by the U.S. Food and Drug Administration (FDA) as "Category 1," generally recognized as safe and effective, be sold in the state, which would ban the vast majority of sunscreen products available to Hawaii residents and visitors.

Sunscreens are regulated by the FDA as Over-The-Counter (OTC) drugs and FDA has sole authority to approve sunscreen ingredients for use in the United States. Manufacturers must formulate products using only these ingredients. Individual sunscreen active ingredients are reviewed by FDA and only those that are included in FDA's monograph may be used in sunscreen products marketed in the U.S.

HB 2248 would impose an outright ban on sunscreen products that contain any one of 12 out of 15 approved sunscreen ingredients currently recognized as safe and effective. This bill would create a serious public health issue by banning the sale of critical sunscreen protection for millions of consumers

and tourists in Hawaii. Policy decisions that will likely adversely impact public health should not be made ahead of a scientific consensus on this issue.

As noted in the legislation, FDA is in the process of a comprehensive rulemaking seeking additional data on 12 sunscreen ingredients to affirm their status as Category 1. This process, however, will take time, likely beyond 2023. In the interim, FDA has repeatedly and consistently stressed that consumers should continue to use all available sunscreen on the market to protect against the dangers of skin cancer. FDA, Centers for Disease Control and Prevention (CDC), U.S. Surgeon General, American Academy of Dermatology (AAD), Skin Cancer Foundation and health care professionals worldwide emphasize that using sunscreens is a critical part of a safe sun regimen.

According to The Skin Cancer Foundation, skin cancer is the most common form of cancer, with one-in-five people in the U.S. expected to be diagnosed within their lifetime. Ninety percent of non-melanoma skin cancers are associated with exposure to ultraviolet (UV) radiation from the sun. Sunscreens are proven to prevent the harmful effects of solar radiation, and we are concerned that restricting the use of vital sunscreen ingredients could lead to higher skin cancer rates in the U.S.

We understand that the decline of coral reefs is an urgent issue requiring policymakers to take pressing action. However, we urge you to direct your attention to proven causes of coral reef decline, which should be addressed. This proposed ingredient ban ignores the real causes of coral decline according to scientists from around the world, the foremost being climate change. Coral reefs are impacted by an increasing array of hazards – primarily from effects of pollution (acidification and runoff), global climate change and unsustainable fishing practices.

Published studies claiming to show adverse impacts of sunscreens on coral (e.g. Downs et al. 2016) are unreliable and should therefore not be used when making important policy decisions.<sup>1</sup> Measured sunscreen levels in U.S. coastal waters where coral live are extremely low (parts per trillion levels have been detected) - equivalent to adding a few drops of sunscreen to the Rosebowl Stadium filled with seawater (Mitchelmore et al., 2019).<sup>2</sup>

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<sup>1</sup> Downs C.A., Kramarsky-Winter E., Segal R., Fauth J.E., Knutson S., Bronstein O., Ciner F.R., Jeger R., Lichtenfeld Y., Woodley C.M., Pennington P., Cadenas K., Kushmaro A. and Loya, Y. 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 U.S. Virgin Islands. *Archives of Environmental Contamination and Toxicology* 70 (2), 265-288.

<sup>2</sup> Mitchelmore, C.L., He, K., Gonsior, M., Hain, E., Heyes, A., Clark, C., Younger, R., Schmitt-Kopplin, P., Feerick, A., Conwat, A. and L. Blaney. 2019. Occurrence and distribution of UV filters in coastal surface water, sediment and coral tissue from Hawaii. *Science of the Total Environment* 670, 398-410.

February 3, 2020

Page **3** of **3**

HB 2248 would ban the vast majority of affordable and effective sunscreen products ahead of both valid environmental and health data and studies. We respectfully ask that you oppose HB 2248.



To: The Honorable John M. Mizuno, Chair,  
The Honorable Bertrand Kobayashi, Vice Chair, and Members  
House Committee on Health

Re: HB 2248 – relating to products containing sun-protection factors

Hearing: Tuesday, February 4, 2020, 10:30 a.m. Room 329

Position: **Strong Support, and recommending earlier implementation date: Jan 1, 2021**

Aloha, Chair Mizuno, Vice Chair Kobayashi, and Committee Members,

The HAWAII REEF AND OCEAN COALITION – HIROC – was formed in 2017 by coral reef scientists, educators, local Hawaii environmental organizations, elected officials, and others to address a crisis facing Hawaii’s coral reefs and ocean – namely, the pollution of our near-shore environment by sunscreens that are literally killing our marine life. We are currently asking the Legislature to pass a handful of very important bills to save our coral reefs – they are bills relating to sunscreens, plus bills on cesspools, plastic marine debris, the climate crisis and sea level rise.

We are currently asking the Legislature to pass a handful of very important bills to save our coral reefs from this crisis. HIROC **strongly supports** this important bipartisan bill.

This bill would bar the use of any sunscreen that is not “GRASE” – generally recognized by the Federal Food and Drug Administration as Safe and Effective. The chemicals that the FDA has determined to include as Category III - NOT GRASE can adversely affect all living things with endocrine receptors. Numerous studies over the past 20 years have documented similar toxic effects found in humans are affecting corals, fish, and other marine life, leading to the enactment of Act 104, Session Laws of Hawaii 2018.

The effective date of IMPLEMENTATION in HB 2248 right now is January 1, 2022. We respectfully recommend that this implementation date be advanced to January 1, 2021, one year earlier, to coincide with the implementation date of Act 1014 of SLH 2018, which is the law that bans oxybenzone and octinoxate as of January 1, 2021. Mahalo for the opportunity to testify.

Respectfully submitted,  
Alan B. Burdick, on behalf of HIROC, 486-1018

Burdick808@gmail.com

**HB-2248**

Submitted on: 2/2/2020 6:45:36 PM

Testimony for HLT on 2/4/2020 10:30:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Scott Foster	Hawaii Advocates For Consumer Rights	Support	No

Comments:

Aloha,

Please support HB2248 that will help protect Hawaii's reefs and sealife.

**LATE**

**HB-2248**

Submitted on: 2/3/2020 3:24:20 PM

Testimony for HLT on 2/4/2020 10:30:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Thorne Abbott	Coastal Planners, LLC	Support	No

Comments:



**LATE**

TO THE HOUSE OF REPRESENTATIVES COMMITTEE ON HEALTH  
Representative John M Mizuno, Chair  
Representative Bertrand Kobayashi, Vice Chair  
For Hearing Feb. 4, 2020 10:30AM  
Room 329 Hawaii State Capitol

**In Support of HB 2248 - Sale of only GRASE I Sunscreens in Hawaii**

Dear Rep. John M. Mizuno, Chair, Rep. Bertrand Kobayashi, Vice Chair and Committee Members,

My name is Mendy Dant, and I am Exec. Vice President of Fair Wind Cruises and Kona Sunrise Charters in Keauhou Kona, Hawaii. We have been taking visitors and residents alike snorkeling to Kealakekua Bay since 1971. Over the years as tourism has grown, we have seen a negative effect on our coral reef's health. Since we have had a couple of very warm summers, we have seen further decline.

We understand the harmful chemicals in the popular sunscreens have caused many of our corals to become sterile. Now, that the FDA has declared its concerns about the effects of chemical sunscreens on human health, removing the chemicals from sunscreen should be supported by everyone concerned with the health of every living thing that has an endocrine system. That is every mammal and corals because they are animals.

Sun Protection Factor ingredients are drugs regulated by the FDA. The FDA is extremely concerned about their safety and efficacy for human use because chemical sunscreen manufacturers have still not provided the data the FDA requires in order to determine if their products are safe. Therefore, for the first time in its 40-year history, the FDA has re-opened one of its monographs for updating - the monograph on sunscreens.

The mineral sunscreen prevents sunburns when used as directed, that is why FDA has given it their GRASE stamp of approval. Johnson & Johnson owns Neutrogena and they market a number of all mineral sunscreen products, Sheer Zinc and Pure & Free baby sunscreen, to name only two both are 100% zinc. On the label it states it is #1 Dermatologist recommended sun care, and it gives superior sun protection against UVA & UVB rays to prevent sunburns, now if this did not protect from the sun as well as their chemical sunscreens they would be open to a lawsuit. So, their argument that people will get skin cancer if they only use mineral sunscreen is not true based on their own marketing.

Please support this bill HB2248 and protect the public from these harmful and dangerous chemicals.

Sincerely,

Mendy Dant  
Exec. Vice President Fair Wind Cruises  
Kona Sunrise Charters Inc  
78-6775 Makenawai St  
Kailua Kona, Hi 96740



February 4, 2020

**SUPPORTING HB 2248 - Sale of only GRASE, category 1, Sunscreens in Hawaii**

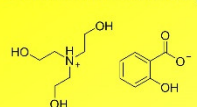
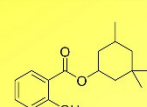
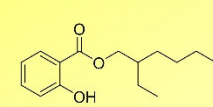

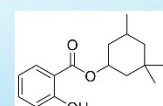
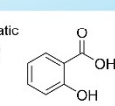
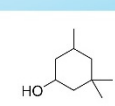
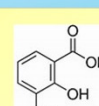
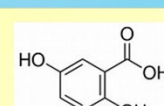
Thank you for sponsoring and supporting this critical legislation that will protect Hawaii's natural resources and the public health.

In 1992, the U.S. National Toxicology Program first demonstrated that rats exposed to relevant concentration to oxybenzone caused endocrine disruption, resulting in reduction in epididymal sperm density in males, and increase in the length of the estrous cycle in females. In 1997, scientists Gulati and Mounce demonstrated that oxybenzone exposure in mice caused changes in liver, kidney, and prostate weights, reduction in immune function, and significantly increased uterine weight in juveniles. All of these symptoms are consistent with the pathological signs associated with estrogenic-axis endocrine disruption. Since these studies, more than 100 scientific studies have demonstrated that oxybenzone and other non-GRASE sunscreen drugs induce a wide range of toxicities.

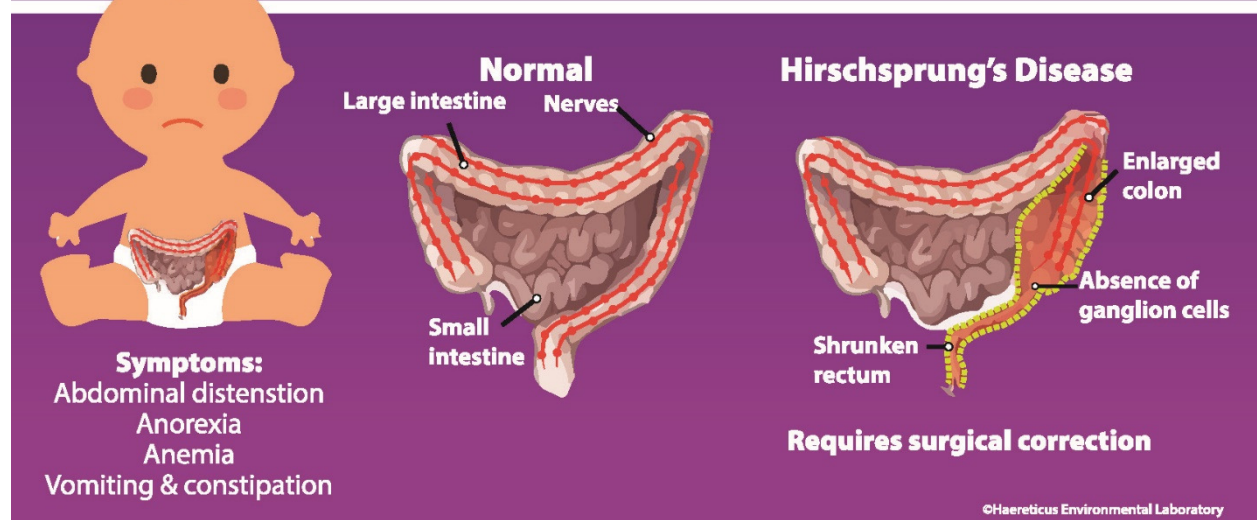
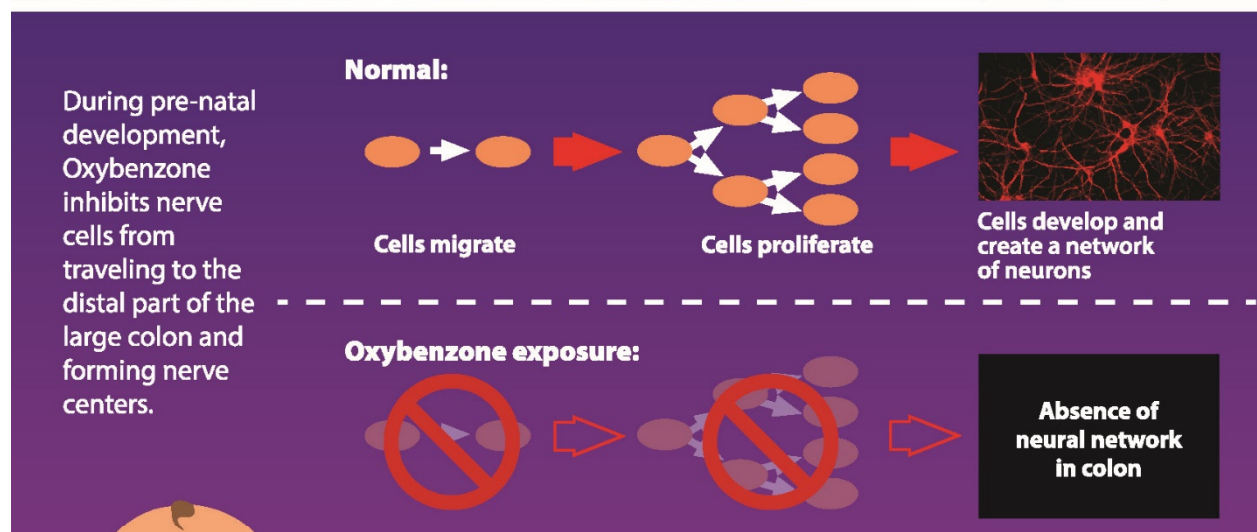
In February of 2019, the U.S. Food and Drug Administration recognized that there was insufficient data in both the safety and effectiveness of 12 of the 16 over-the-counter sunscreen drugs. Two of the 16 sunscreen drugs were regulated as not safe, PABA and a type of salicylic acid.

We argue that all the salicylic acid UV drugs (octisalate and homosalate) pose a potential threat in inducing birth defects or miscarriages in pregnant women, based on the fact that all that of the UV drugs are metabolized into documented teratogens – chemicals that are embryonic poisons.

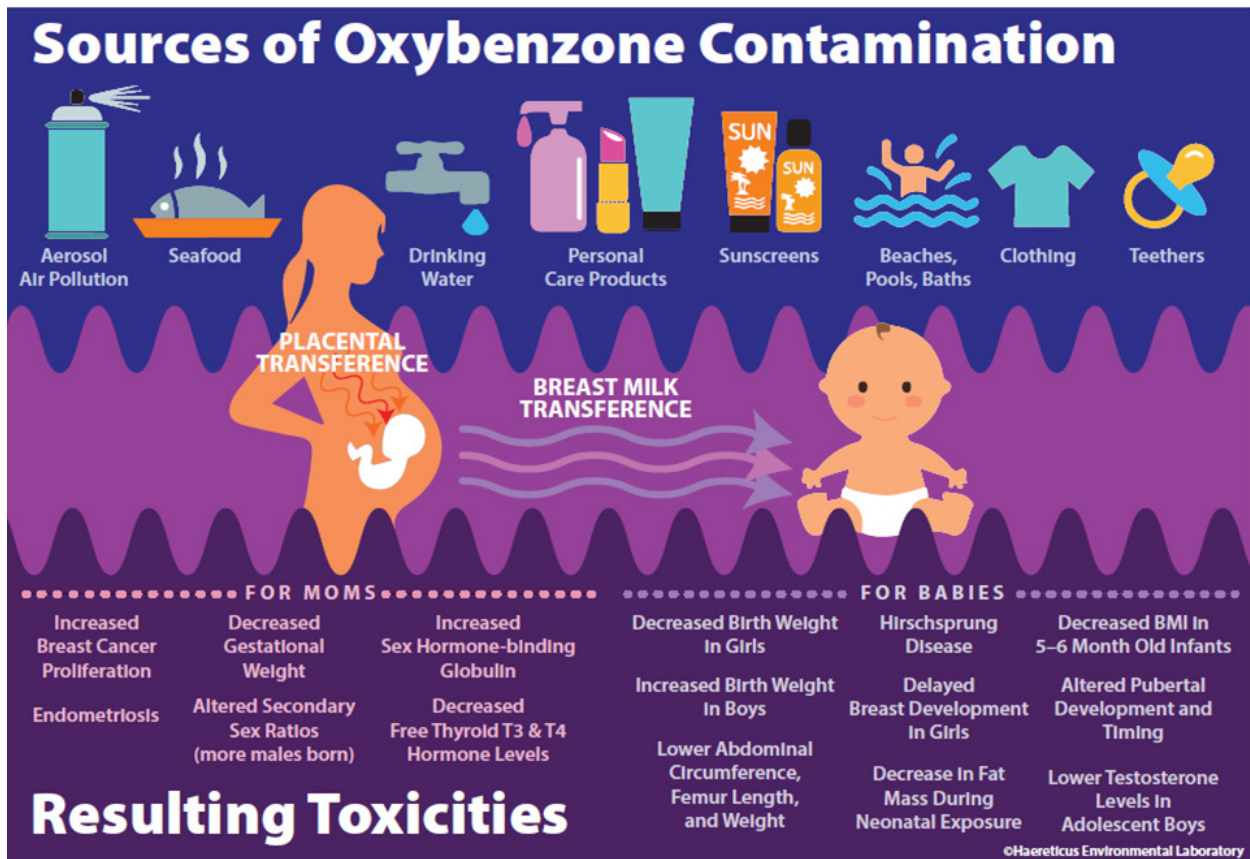
**Pregnancy Dangers of Salicylate-Sunscreen Drugs:**

<b>Trolamine Salicylate</b>	<b>Homosalate</b>	<b>Octisalate</b>
 <b>Category 2</b> Banned, 2019	 <b>Category 3</b> Removed from GRASE, 2019	 <b>Category 3</b> Removed from GRASE, 2019
	<p><b>The Salicylate-sunscreens, such as trolamine salicylate, homosalate, and octisalate can be metabolized into salicylic acid. Salicylic acid and its derivatives can cause birth defects.</b></p> <div style="display: flex; justify-content: center; align-items: center;">  <span style="margin: 0 10px;"> <math>\xrightarrow{\text{H}_2\text{O, enzymatic hydrolysis}}</math> </span>  <span style="margin: 0 10px;">+</span>  </div> <p style="display: flex; justify-content: space-around; font-size: small;"> <span>Homosalate</span> <span>Salicylic acid</span> <span>3,3,5-trimethylcyclohexan-1-ol</span> </p>	
<p>Salicylic acid is further metabolized into two chemicals known to cause birth defects: 2,3-dihydroxybenzoic acid and 2,5-dihydroxybenzoic acid (Karabulut et al. (2000) Toxicology In Vitro 14(4):297-307).</p>		
 2,3-dihydroxybenzoic acid	 2,5-dihydroxybenzoic acid	
<p><b>Many sunscreen products contain 15% homosalate and 5% octisalate. These chemicals are readily absorbed through the skin and into the blood, where they can cross into the womb and into the developing fetus.</b></p>		

With the passing of Hawaii Act 104 in 2018, most of you are familiar with the dangers of oxybenzone to pregnancy. Oxybenzone has been shown to induce a causative mechanism that gives rise to a birth defect called Hirschsprung's disease. Women who are exposed to oxybenzone are especially at risk, because of the timing of the exposure with interference with development and migration of nerve clusters in the lower colon.



There are more than 30 other scientific papers on oxybenzone alone that associated exposure to oxybenzone with pregnancy complications, birth defects, and neonatal and child developmental retardation.



All of the category 3 drugs have yet to be sufficiently demonstrated to be safe, or even effective in protecting our skin from the complete harmful effects of UV light from the sun.

We hear a lot of claims that “sunscreen” protects against skin cancer. Unfortunately, skin cancer rates have only increased despite increased sunscreen usage. It could be easily and consistently argued from the epidemiology studies to date that the use of certain sunscreens is providing a false sense of safety and effectiveness, and that the use of sunscreen may be the cause of increased rates of melanomas and skin carcinomas.

In a 2005 scientific paper by a team of researchers, they stated in their conclusion that, “As such, sunscreens might promote instead of protect against melanoma.” (Chiang et al., 2005 Sunscreen ingredients inhibit inducible nitric oxide synthase: a possible biochemical explanation for the sunscreen melanoma controversy. *Melanoma Research* 15:3-6)

This study was a foundation stone for a work published by the International Agency for Research on Cancer that, “Advertising for sunscreens and labeling of sunscreen bottles should inform consumers of the carcinogenic hazards associated with sunscreen abuse.”

In 2011, Dutch and French scientists published a study that “Epidemiological evidence that UVA radiation is involved in the genesis of cutaneous melanoma.” And that “...sunscreens may partly

explain why melanoma incidence increases in most light-skinned populations without concomitant increase in mortality.” Autier et al. 2011. E Epidemiological evidence that UVA radiation is involved in the genesis of cutaneous melanoma. Current Opinions in Oncology 23.

It was pointed out to me that a number of product-protection firms have been slandering me and my colleagues’ scientific research in this Hawaii Legislative season. This is an old game that these firms have played, reminiscent of the tobacco wars, the leaded-gas wars, the asbestos wars, the DDT wars, and the opioid wars. They also go on to say that the only science that has merit was generated by a researcher that they have wholly funded and promoted. By all means, listen carefully to their propaganda, but please also consider this article:

[https://www.salon.com/2020/02/02/the-art-of-scientific-deception-how-corporations-use-mercenary-science-to-evade-regulation/?ct=t\(RSS\\_EMAIL\\_CAMPAIGN\)](https://www.salon.com/2020/02/02/the-art-of-scientific-deception-how-corporations-use-mercenary-science-to-evade-regulation/?ct=t(RSS_EMAIL_CAMPAIGN))

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Craig A. Downs". The signature is fluid and cursive, with a long, sweeping underline that extends to the right.

---

Craig A. Downs, Ph.D.  
Executive Director



Activities & Attractions Association of Hawaii  
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**Testimony to the  
COMMITTEE ON HEALTH**

Rep. John M. Mizuno, Chair  
Rep. Bertrand Kobayashi, Vice Chair

**LATE**

**SUPPORT HB2248**

**Tuesday, February 4, 2020, 10:30 A.M.  
Conference Room 329**

Aloha Chair Representative Mizuno and Vice-Chair Representative Kobayashi along with members the committee,

Mahalo for this opportunity to testify, my name is Toni Marie Davis. For the last 23 years, it has been my honor to serve the Activity & Attraction industry of Hawaii through my position as the Executive Director of A3H (Activities & Attractions Association of Hawaii). A3H represents nearly 150 businesses statewide. Our members range in size from very large (over 300 employees) to very small (1-2 employees) aggregated well over 1500 employees/Hawaii residents. A3H's purpose is to support the sustainability of Hawaii businesses, the environment and our communities.

While reviewing Bills for the 2020 session, our board of directors, which consists of CEOs and Owners from Atlantis Adventures, Blue Dolphin Charters, Fair Wind Cruise, Hawaiian Paddle Sports, Polynesian Cultural Center, Schuman Aviation, Smith's Luau and Fern Grotto Tours, and Warren & Annabelle's Magic Show unanimously approved support of HB2248.

According to ReefsatRisk.org Hawaii has lost 40% of our corals reefs already, it is happening, and we need to be more aware and stop ignoring that what we do affects our environment. There is a great video on the impacts of sunscreen that I would encourage you all to watch: <https://www.youtube.com/watch?v=aGP9loQ0dqs> .

Please also reviewed documents from The National Oceanic and Atmospheric Administration who have recognized this existential threat to our coral reefs. (See the image on back), (<https://oceanservice.noaa.gov/news/sunscreen-coral.html>)

Sincerely,  
Toni

Toni Marie Davis  
Executive Director



Activities & Attractions Association of Hawaii  
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## SUNSCREEN CHEMICALS AND MARINE LIFE

How sunscreen chemicals enter our environment:



How sunscreen chemicals can affect marine life:



**GREEN ALGAE:** Can impair growth and photosynthesis.



**CORAL:** Accumulates in tissues. Can induce bleaching, damage DNA, larval defects and even kill.



**MUSSELS:** Can induce larval deformities



**SEA URCHINS:** Can damage immune and reproductive systems, and deform larvae.



**FISH:** Can decrease fertility and reproduction, and cause female characteristics in male fish.



**DOLPHINS:** Can accumulate in tissues and be transferred to young.

### What can we do?

Seek shade between 10 am & 2 pm, use Ultraviolet Protection Factor (UPF) sunwear, and choose sunscreens with chemicals that don't harm marine life.



Seek shade: 10am to 2pm



Umbrella



Sun hat



UV Sun glasses



Sun shirt



Leggings



[oceanservice.noaa.gov/news/sunscreen-corals](https://oceanservice.noaa.gov/news/sunscreen-corals)



**HB-2248**

Submitted on: 2/2/2020 10:42:20 AM

Testimony for HLT on 2/4/2020 10:30:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Ralph Bishop	Individual	Support	No

Comments:

Hawaii is and should continue to lead on this important environmental issue. We can no longer allow our ocean and our reefs to be threatened and compromised by chemical pollution. Pass this legislation.

**HB-2248**

Submitted on: 2/2/2020 10:34:25 PM

Testimony for HLT on 2/4/2020 10:30:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Lisa Marten	Individual	Support	No

Comments:

Aloha. Our reefs are stressed already by warming oceans, runoff with pollution and sediments, and overfishing in some areas. While some of these issues are very difficult to resolve, reducing additional stress on the reefs by reducing toxic chemicals from sunscreens is an easy fix. Please pass this Bill.

Thank you, Lisa Marten

**HB-2248**

Submitted on: 2/3/2020 3:45:15 AM

Testimony for HLT on 2/4/2020 10:30:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Jennifer Azuma Chrupalyk	Individual	Support	No

Comments:

Keep our environment and our reef safe

**HB-2248**

Submitted on: 2/3/2020 5:32:23 AM

Testimony for HLT on 2/4/2020 10:30:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Robin Kaye	Individual	Support	No

Comments:

## In Support of HB 2248 - Sale of only GRASE I Sunscreens in Hawaii

First, I would like to Mahalo Representatives Gene Ward, Rida Cabanilla Arakawa, Chris Lee, Amy Perruso, David Tarnas, Chris Todd, Tom Brower, Lynn DeCoite, and Dee Morikawa for introducing HB 2248 which will add measures to further protect Hawaii's environment, constituents and the 10 million visitors that come to enjoy its natural beauty.

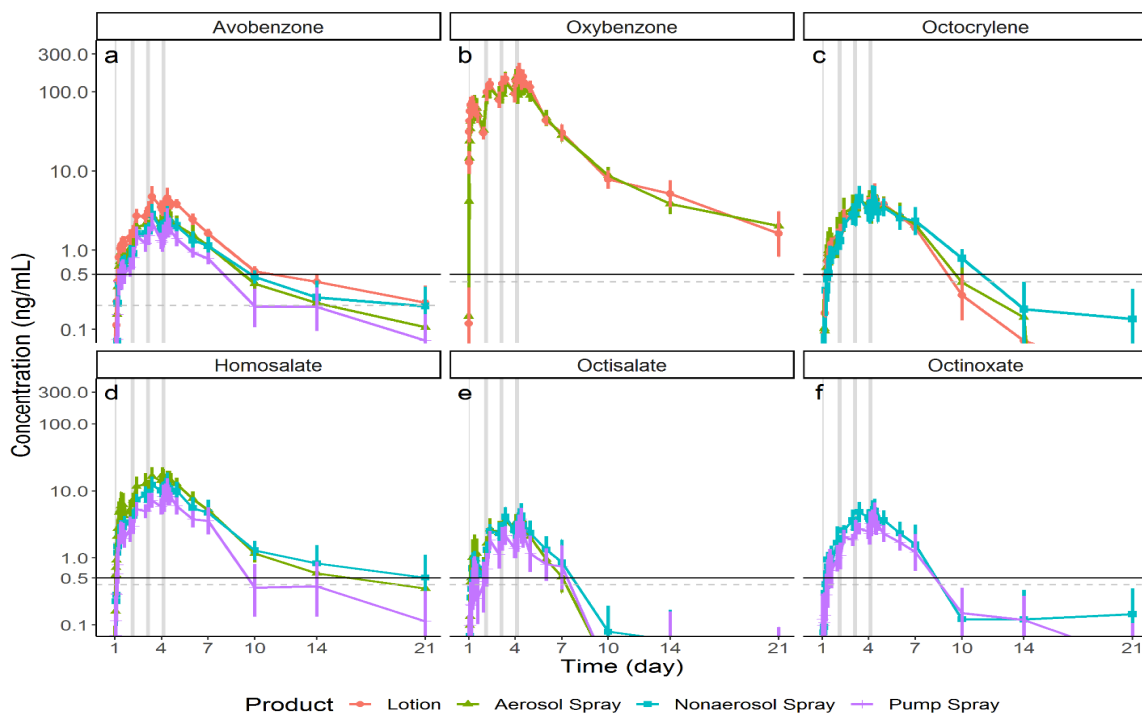
As you know, Hawaii's Act 104 (banning the sale of sunscreens containing oxybenzone or octinoxate) has caused the world to open its eyes to the environmental destruction that sunscreens have caused and continue to cause globally. Because of this, Palau, Aruba, Bonaire, the U.S. Virgin Islands, Marshall Islands, and the city of Key West have followed Hawaii's example and have introduced similar/identical bans.

Another impact of Hawaii's innovative planning/action has caused the Food & Drug Administration (FDA) to question the human safety of not just oxybenzone and octinoxate, but of all 16 sunscreens actives currently approved for use in the United States. This action has caused FDA to identify that only Zinc Oxide and Titanium Dioxide actives are **Generally Recognized as Safe and Effective** (GRASE - Category I) for human use. The remaining 14 chemicals have been reclassified as **not being GRASE** "because the public record does not currently contain sufficient data to support positive GRASE determinations". FDA has published their reasoning for this action in the February 26, 2019 Federal Register:

*"For example, the available literature includes studies indicating that oxybenzone is absorbed through the skin to a greater extent than previously understood and can lead to significant systemic exposure, as well as data showing the presence of oxybenzone in human breast milk, amniotic fluid, urine, and blood plasma. The significant systemic availability of oxybenzone, coupled with a lack of data evaluating the full extent of its absorption potential, is a concern, among other reasons, because of questions raised in the published literature regarding the potential for endocrine activity in connection with systemic oxybenzone exposure. Nearly all of these sunscreen active ingredients also have limited or no data characterizing their absorption." (FYI - by law, it is industry's responsibility to provide this data)*

Because of industry's inability to provide adequate safety data to FDA and their apprehension to confirm FDA's concerns about "significant systemic exposure" the FDA conducted their own study on products currently being sold that contained 6 of the chemicals in question (Figure 1) ... FDA concluded that all posed a significant risk to human health because they absorb into our blood stream above the safety cut-off point of 0.5 ng/ml (horizontal line at 0.5 on each of the graphs below) **after one day** of application. Additionally, even when applications were **stopped after 4 days**, the level of sunscreens in the blood stayed above the 0.5 ng/ml level (oxybenzone never dropped below this line even 17 days after applications were stopped).

Figure 1: Human Absorption of 6 of the 12 Chemicals in Question:



Reference: Matta et al JAMA 2020; 323:256-267

The information obtained from this experiment, confirms FDA's concerns about the safety of these chemicals and justifies their request to industry to provide data that, among other things, demonstrates these chemicals will not cause cancer or reproductive effects to offspring based on absorption levels. Another point that justifies FDA's safety concerns is based on the results obtained from a recent 2-year carcinogenicity study that was conducted by the US National Toxicology Program (NTP) on oxybenzone. The summary data released by NTP states that at the **levels tested** oxybenzone produced:

- 1) Increased incidence of **thyroid** C-cell adenomas and uterine stromal polyps in female rats.
- 2) Occurrence of brain and spinal cord malignant meningiomas in male rats.
- 3) Increased incidences of non-neoplastic lesions of the uterus and **adrenal cortex** in female rats and of the **testis** and **pancreas** in male rats.
- 4) No evidence of carcinogenic activity in male or female mice.
- 5) Increased incidences of non-neoplastic lesions of the bone marrow, spleen, and kidney in female mice and of the bone marrow, spleen, kidney, and liver in male mice.

These findings were based on oxybenzone being tested at 0.1%, 0.3% and 1% concentrations, which is **6 to 60 times lower** than the 6% level that is commonly used in sunscreen products.

So, how does the human absorption and animal carcinogenicity data presented above tie into the environmental concerns in coral and other aquatic life forms that Act 104 was based on?

- 1) FDA's long history determining with human safety is tied into the amount of chemical that is in the blood. For lack of a better term, this is "guilt by association", but something cannot produce an adverse event if it is not present.
- 2) The NTP data not only identifies the carcinogenic potential of oxybenzone, but demonstrates that it targets endocrine glands (thyroid, adrenal glands, testies, pancrease ... etc). The chemical is introduced into the system (rodents) and it produces specific adverse reactions (damage to endocrine glands) ... this is called "causation".

Therefore, one can summarize that exposure to oxybenzone is associated with specific adverse effects that impact living organisms or "**association is related to causation**". How can we extrapolate this concern to all living organisms; simple! The World Health Organization has stated that chemicals that impact endocrine glands (endocrine disruptors) are not specific to a certain species. In other words, chemicals with this potential do not care (differentiate) if you are a coral, fish, bird, democrat or republican ... the only prerequisite is that an endocrine receptor is there to impact!

Please vote to support HB 2248 and continue to protect Hawaii's environment, citizens and visitors.

Most Respectfully,

Joe DiNardo (retired toxicologist with 44+ years experience and frequent Hawaii visitor)