

Sunscreen Report

Sustainability Board - 10/30/18

Action:

In July of 2018, [Hawaii became the first state to pass a bill](#) banning the sale of sunscreen containing chemicals believed to harm coral reefs. It's also first-in-the-world legislation. The new rules will go into effect Jan. 1, 2021.

The legislation prohibits the distribution of sunscreens containing the chemicals oxybenzone and octinoxate that scientists have [found](#) contributes to coral bleaching when washed off in the ocean. Exceptions will be made for patients with prescriptions. The law also excludes skin care products intended for use as a cosmetic.

Research:

An estimated 14,000 tons of sunscreen is believed to be deposited in oceans annually with the greatest damage found in popular reef areas in Hawaii and the Caribbean.

In 2015, the nonprofit Haereticus Environmental Laboratory surveyed Trunk Bay beach on St. John, where visitors ranged from 2,000 to 5,000 swimmers daily, and estimated over 6,000 pounds of sunscreen was deposited on the reef annually. In Maui alone, 55 gallons a day pour into nearshore waters, according to the Hawaii Department of Land and Natural Resources.

Scientists consider the active ingredients lethal to coral at greater than 62 parts per thousand, or one drop in six and a half Olympic swimming pools.

A [2015 study](#) conducted by scientists at the University of Central Florida found that oxybenzone, a common UV-filtering compound, kills the coral, causes DNA damage in the coral's adult stage, and deforms the DNA in the larval stage, hindering its development.

A separate [2015 study](#), published in the *Archives of Environmental Contamination and Toxicology* and conducted by biologist Craig Downs, also found that the chemicals produced water pollution and had damning effects on the coral reefs.

Another study, published in the U.S. journal *Environmental Health Perspectives*, showed that even small amounts of the chemicals made the algae in coral susceptible to viral infection. The killing, or bleaching, of the algae — which have a symbiotic relationship with the coral — is a death knell for the whole structure.

Opposition:

Makers of traditional sunscreens opposed the legislation, pointing out that the chemicals in question are approved by the F.D.A. and vital to preventing skin cancer. Oxybenzone is found in 70 percent of sunscreens on the market. Octinoxate is found in 8%. Physicians and representatives of the personal care products industry went on record opposing the bill, and asked that if a bill must be passed, to give the industry five years to develop alternatives. The Legislature gave them three.

Alternatives:

Reef-safe sunscreen alternatives include mineral sunblocks with zinc oxide and titanium dioxide. They must be “non-nano” in size to be considered reef-safe. If they are below 100 nanometers, the creams can be ingested by corals.

- [Health.com](#) reported on some products that are oxybenzone-free.
- [Prevention.com](#) also listed their best reef-safe sunscreens.
- The Oceanic Society also lists [behaviors and research](#) revolving around reef safe sunscreens.
- Locally, there is also good advice in existence
 - [Reef Relief](#)
 - NOAA
 - [National Park Service](#)

Outcomes:

The Skin Cancer Foundation sent out a [press release](#) on May 3 that encourages the U.S. Food and Drug Administration to approve new sunscreen ingredients that are considered safer.

The Caribbean island of Bonaire is one of many places doing just that. The Dutch municipality heard about Hawaii’s law and is planning to enact a similar ban.

Already, many island resorts and attractions, including Hanauma Bay State Park, are urging visitors to use reef-safe sunscreen.

A survey by US News on Hawaii’s beaches after the ban announcement? Many thought it had already gone into effect. None had a problem with it.

Options:

Recommend to the City Commission:

- A) An ordinance for sunscreen ban matching Hawaii’s rules and timeline.
- B) Education/outreach on what ingredients to avoid
- C) Education/outreach on what products are considered reef safe
- D) Research/utilize/create a certification program that recognizes businesses that only sell reef safe sunscreens.
- E) Do nothing.
- F) Other: