



For Immediate Release

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Reef-friendly sunscreen initiative leads to reduction of oxybenzone in Kahalu‘u Bay *Continued efforts needed to save coral reefs*

KAHALU‘U BAY, Hawai‘i Island, Hawai‘i—May 21, 2020—The results are in: oxybenzone levels have dropped dramatically at Hawai‘i Island’s Kahalu‘u Bay.

Thanks to tens of thousands of visitors who responded positively to The Kohala Center’s ongoing “Reef-Friendly Sun Protection” campaign, oxybenzone levels have dropped 93 percent or more at water sampling sites in the bay between the start of the campaign in April 2018 and November 2019.

Cindi Punihaole, director of The Kohala Center’s Kahalu‘u Bay Education Center, attributes this to the dedication and aloha with which program staff and community stewards, known as ReefTeachers, approach bay visitors to educate them about ways to protect the bay’s delicate ecosystem, including wearing protective clothing and using mineral-based sunscreens.

“What these results show is that community stewardship works,” Punihaole said. “We are able to have meaningful conversations with hundreds of visitors every day to let them know about the damaging effects chemical sunscreens and physical contact with corals can have on our vulnerable reefs. We approach our guests as Aloha Ambassadors, asking for their help to care for Kahalu‘u’s marine ecosystem. A significant majority of our guests are unaware and want to do the right thing, they just need to be shown how.”

With County of Hawai‘i beach parks reopening this week, Kahalu‘u Bay’s fragile ecosystem becomes vulnerable once again to damage resulting from swimmers and snorkelers stepping and standing on coral reefs, as well as diminished water quality due to sunscreen chemicals and other pollutants. While Kahalu‘u Bay Education Center’s retail operations will remain closed indefinitely, program staff will be present on a daily basis beginning next week to provide on-site education about proper reef etiquette and the benefits of reef-friendly sun protection.

“We are putting out a plea to visitors to the bay to please extend social distancing practices to our corals and marine life, too,” said Kathleen Clark, marine stewardship and education specialist at The Kohala Center. “We urge swimmers and snorkelers to always use reef-friendly sun protection,

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and to keep a safe distance from marine life, corals, and even rocks that provide juvenile coral and limu (seaweed) a place to grow. If you must stand, please stand on sand. We all have a role to play in helping Kahalu‘u Bay heal and caring for all of Hawai‘i’s marine ecosystems so that they will continue to care for us.”

Oxybenzone levels declined from 93 to 100 percent at four of the five water sample collection sites. The northernmost sample site saw an increased presence of the chemical, which Punihaole attributed to visitors who do not access the bay from Kahalu‘u Beach Park and thus do not receive on-site education through the campaign.

Laboratory tests confirm that oxybenzone, an active ingredient found in many common sunscreens, is contributing to coral decline. Oxybenzone and other chemicals affect coral growth and reproduction, and also harm fish and other marine life. While the effects of these chemicals on human health are not yet clear, studies have shown that these chemicals are absorbed through the skin into the body, prompting the U.S. Food and Drug Administration (FDA) last year to request safety data on 12 sunscreen active ingredients.

Currently, the FDA designates only two active ingredients as “generally recognized as safe and effective”: zinc oxide and titanium dioxide, which are naturally occurring compounds used in the mineral-based sunscreens the campaign recommends.

Punihaole noted that West Hawai‘i accommodations, businesses, and the local Chamber of Commerce have also been supportive of the campaign and have helped to magnify its message, with several hotels and tour operators distributing educational materials and retailers featuring reef-friendly sunscreen products prominently in their stores. Mineral-based sunscreen manufacturers have also provided the campaign with thousands of product samples to distribute to visitors to the bay.

“Our guests have appreciated the assertive measures we are taking to try to save the health of our island’s coral reefs and marine life,” said Mendy Dant, executive vice president of Fair Wind Cruises and Kona Sunrise Charters. “They are often not familiar with what exactly reef-safe sunscreen is, but once they hear about the reasons to use it, they are all for it and want to support the best environmental behaviors. Wearing UV protective clothing and swimwear has also been very popular with our guests.”

The campaign emphasizes that the most reef-friendly approach people can take to protect themselves from the sun is also the best for their own health: covering up. Clothing such as sunwear shirts and rash guards, hats, wraps, and board shorts reduce exposure to the sun’s ultraviolet rays while also keeping chemicals out of marine ecosystems. Small amounts of mineral-based sunscreens with non-nano zinc oxide or titanium dioxide listed as active ingredients are the next best option.

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Sunscreens containing oxybenzone, avobenzone, octinoxate, octocrylene, and a host of other chemicals should be avoided. Starting on January 1, 2021, Hawai‘i state law will prohibit the sale or distribution of sunscreens containing oxybenzone or octinoxate.

Scott Head, vice president of resort operations at Waikoloa Land Company, described how the campaign has aided them in providing education to their guests. “We take our responsibility as stewards of this land seriously, which includes the critical reefs that surround the island,” Head said. “We share this responsibility with the many visitors who love spending time here and prize our unique ecosystem. The Kohala Center has been a great partner in this, helping us raise awareness and shape behavior with beach signs that make a true difference in how our beaches are cared for by those who frequent it.”

Since launching the campaign, the center has distributed more than 25,000 informational pamphlets and 10,500 samples of mineral-based sunscreens; swapped 144 containers of chemical sunscreen for full-size, mineral-based alternatives, and collected 436 pounds of chemical sunscreen for safe disposal.

While the substantial decrease of oxybenzone in the bay is cause to celebrate, Punihaole cautions that the levels still exceed the U.S. Environmental Protection Agency (EPA)’s risk quotient by as much as seven times at the sampling point closest to shore, where most swimmers and snorkelers enter and exit the water and many of the bay’s resident honu (green sea turtles) congregate to feed.

“The day we launched this campaign, the oxybenzone measurement nearest the shoreline was 736 times higher than the EPA risk quotient, so the fact it’s come down that much is huge,” Punihaole said. “But we’re determined to get the levels below what the EPA considers high risk, ideally down to zero. We have to continue our work. The bay is asking for our help. We need everyone’s kōkua to save this cultural and ecological treasure.”

Dr. Craig Downs, executive director of Haereticus Environmental Laboratory, which facilitated the collection and analysis of both sets of water samples from Kahalu‘u Bay, agreed. “Public education is an effective way of reducing actions that cause chemical pollution on our reefs,” Downs said. “Building relationships with more area businesses, particularly the retailers that sell or distribute sunscreens that threaten coral health, and encouraging them to switch to and promote reef-friendly alternatives instead would also have a major impact on water quality and ecosystem resilience.”

The ReefTeach program at Kahalu‘u Bay was started in 2000 by area residents who were concerned about the increasing volume of people visiting the bay and the impact it was having on the bay’s vibrant but fragile ecosystem. The Kohala Center assumed management of the program in 2008. ReefTeach volunteers have educated more than 700,000 beachgoers about “reef etiquette,” behaviors that include not kicking, standing on, or stepping on coral, feeding fish, and

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touching honu. In 2018, the program began to also focus on other stressors that impact water quality and ecosystem health, including pollutants such as sunscreen chemicals.

To learn more about reef-friendly sun protection and reef etiquette, visit kohalacenter.org/kbec or contact Cindi Punihaole at cpunihaole@kohalacenter.org.

About The Kohala Center

Founded in the year 2000, The Kohala Center (kohalacenter.org) is an independent, community-based center focused on research, education, and ‘āina stewardship for healthier ecosystems. By turning ancestral knowledge and research into action, we cultivate conditions that reconnect us with our food, water, place, and people, so that communities in Hawai‘i and around the world can thrive—ecologically, economically, culturally, and socially.

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