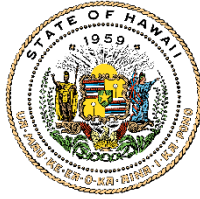


**JOSH GREEN, M.D.**  
GOVERNOR | KE KIA'ĀINA

**SYLVIA LUKE**  
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



**STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
KA 'OIHANA KUMUWAIWAI 'ĀINA**

**DIVISION OF AQUATIC RESOURCES**  
1151 PUNCHBOWL STREET, ROOM 330  
HONOLULU, HAWAII 96813

**DAWN N.S. CHANG**  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE  
MANAGEMENT

**RYAN K.P. KANAKA'OLE**  
FIRST DEPUTY

**DEAN D. UYENO**  
ACTING 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

**Testimony of  
DAWN N.S. CHANG  
Chairperson**

**Before the Senate Committees on  
PUBLIC SAFETY AND INTERGOVERNMENTAL AND MILITARY AFFAIRS  
and  
AGRICULTURE AND ENVIRONMENT**

**Monday, March 25, 2024  
3:00 PM  
Conference Room 225 & Videoconference, State Capitol**

**In consideration of  
SENATE CONCURRENT RESOLUTION 27 / SENATE RESOLUTION 17  
ENCOURAGING THE UNITED STATES NAVY TO ERADICATE OCTOCORAL AND  
OTHER INVASIVE SPECIES FROM PEARL HARBOR**

Senate Concurrent Resolution 27 / Senate Resolution 17 encourages the United States Navy to take responsibility for the eradication of octocoral and other invasive species from the waters of Pearl Harbor and to allocate resources to eradicate octocoral and other invasive species from the waters of Pearl Harbor, including West Loch, Middle Loch, and East Loch. **The Department of Land and Natural Resources (Department) supports these measures and offers the following comments and suggested amendment.**

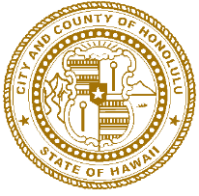
One of the Department's missions is to conserve the State of Hawai'i's unique aquatic ecosystems for present and future generations. A critical threat to these ecosystems lies in the introduction of invasive species, which can outcompete native species for light and space or impact their health in other ways. Hawai'i's native aquatic species are particularly susceptible to the effects of invasive species due to a high rate of endemism, which means they lack natural defenses against foreign organisms. Many aquatic invasive species especially impact native stony corals, which form the foundation of our marine ecosystems and provide natural infrastructure to our islands. Each new invasion decreases the resilience of our reefs. The State of Hawai'i is facing what may be the most catastrophic aquatic invasive species introduction it has seen, and it is critical that the United States Navy take immediate action to prevent the spread of octocorals and other invasive species from the Pearl Harbor watershed to state waters.

The invasive octocoral *Unomia stolonifera* has made headlines the past few years for its aggressive and damaging characteristics that have allowed it to occupy over 60 miles of Venezuelan coast and 1.2 million square miles of seafloor in Mochima National Park, in some areas accounting for 100% cover on the reef. Left unchecked for too long, this uncontrollable spread of *U. stolonifera* in Venezuela has smothered native coral and lead to a large decline in herbivorous fish reproduction. Since its introduction to Venezuela, it is now known to be invasive in Cuba, Puerto Rico, and in Pearl Harbor on O‘ahu. The dense mats of swaying tentacles that can be seen from the shore near the mouth of Peal Harbor have terrifying implications, as one imagines a future where 60 miles of Hawai‘i’s coast is covered causing unknown devastation to the marine life beneath. Perhaps equally concerning are several of the other nonnative species that have been introduced, likely through aquarium dumping, to Pearl Harbor of which we have no other examples of invasions to examine to understand their impacts. This includes a second octocoral, *Capnella spicata*, which may be equally aggressive as *U. stolonifera*.

While the invasive octocorals and other introduced species are only known to be contained within Pearl Harbor, it is only a matter of time until they spread or are found to have already spread to State waters. Currents and storm events could carry fragments of these species out of the watershed, potentially allowing further colonization and reproduction through fragmentation. Additionally, some of the species are fouling species, which means they have the potential to travel longer distances on vessels or marine debris to other Hawaiian Islands, to the Papahānaumokuākea Marine National Monument, or even to our neighbor Pacific jurisdictions. It is the responsibility of the United States Navy to eradicate these species as stewards of the waters of Pearl Harbor, and it is the Department’s duty to support this measure as stewards of the waters of the State of Hawai‘i.

The Department understands that the United States Navy has recently conducted pilot eradication projects in certain areas of Pearl Harbor to test the efficacy of various eradication methods. However, the Department has not been apprised of the specifics of the outcomes of these projects, including any data collected, which would be essential to inform state response if the invasive species are found outside Pearl Harbor. The Department suggests that the resolution be amended to also encourage the United States Navy to provide the Department with regular updates on the status of eradication efforts and the extent of the spread of invasive octocoral.

Mahalo for the opportunity to provide testimony in support of these measures.



# HONOLULU CITY COUNCIL

*KE KANIHELA O KE KALANA O HONOLULU*

530 S. KING ST. STE. 202, HONOLULU, HI 96813

RADIANT CORDERO  
FLOOR LEADER  
*HOPE LUNA HO'OMALU*  
HONOLULU CITY COUNCIL  
DISTRICT VII  
TELEPHONE: (808) 768-5007  
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March 22, 2024

The Honorable Glenn Wakai, Chair  
The Honorable Brandon J.C. Elefante, Vice Chair  
And Members of the Committee on Public Safety and  
Intergovernmental and Military Affairs

The Honorable Mike Gabbard, Chair  
The Honorable Herbert M. "Tim" Richards, III, Vice Chair  
And Members of the Committee on Agriculture and Environment

Monday, March 25, 2024, 3:00 PM  
Conference Room 225 & Videoconference  
State Capitol  
415 South Beretania Street

**Subject: Support for SCR 27 / SR 17 Encouraging the United States Navy to Eradicate Octocoral and Other Invasive Species from Pearl Harbor**

I am writing to provide testimony **in support** of SCR 27 / SR 17 Encouraging the United States Navy to Eradicate Octocoral and Other Invasive Species from Pearl Harbor.

As the Honolulu City Councilmember who represents Pearl Harbor and the surrounding communities, I support efforts to maintain a healthy marine habitat and biodiversity, protect our Hawaiian coral reef ecosystems, and not disrupt the delicate balance of these ecosystems in the waters of Pearl Harbor. As the United States Navy is the principal caretaker of Pearl Harbor and its waters, we rely on and encourage them to responsibly eradicate octocoral and other invasive species to protect and preserve Pearl Harbor's maritime ecosystem.

Thank you for the opportunity to provide testimony **in support** of this measure.

Sincerely,

Radiant Cordero, Councilmember  
Honolulu City Council, District VII



**COMMENTS ON SCR 27 / SR 17**  
ENCOURAGING THE UNITED STATES NAVY TO ERADICATE OCTOCORAL AND OTHER  
INVASIVE SPECIES FROM PEARL HARBOR

Senate Committee on Public Safety and Intergovernmental and Military Affairs  
The Honorable Glenn Wakai, Chair  
The Honorable Brandon J.C. Elefante, Vice Chair

Senate Committee on Agriculture and Environment  
The Honorable Mike Gabbard, Chair  
The Honorable Herbert M. "Tim" Richards, III, Vice Chair

Monday, March 25, 2024 at 3:00 p.m.  
Conference Room 225 & Videoconference

Chairs Wakai and Gabbard, Vice Chairs Elefante and Richards, and Members of the  
Committees:

The Hawaii Military Affairs Council ("MAC") **offers comments** on SCR 27 and SR 17.

The MAC was established in 1985 when the Chamber was appointed by the State to serve as the liaison to the military. The MAC advocates on behalf of Hawaii's military, and is comprised of business leaders, academic institutions, State and County officials, members of the CODEL, community leaders, labor unions and organizations and retired U.S. flag and general officers. The MAC works to support Hawaii's location as a strategic U.S. headquarters in the Indo-Asia-Pacific region which is crucial for U.S. national and homeland security.

The MAC wishes to update the committee that the U.S. Navy is executing on efforts to reduce octocoral and other invasive species in Pearl Harbor. Specifically, the U.S. Navy has been convening an interagency team of experts for this effort, including the National Oceanic and Atmospheric Administration, U.S. Fish and Wildlife Service, and Hawai'i Department of Land and Natural Resources.



U.S. Navy is working closely with agency partners to employ and continually refine our response plan and methodology, and to identify resources, capabilities, and experts that will be necessary for full-scale response and successful eradication.

To be specific, the team has successfully demonstrated that both manual removal and tarp smothering are effective in the short term. To-date, the manual removal method has removed approximately 19,956 sq ft (.45 acres) and the tarping method has eradicated approximately 13,900 sq ft (.32 acres).

Going forward, the U.S. Navy's goal is to scale up operations using funding in FY 2024 including U.S. Navy's pre-proposal for National Marine Fisheries Service (NMFS) Strategic Environmental Research and Development Program (SERDP) funding which has been approved to move to full proposal. Additionally, a Fish & Wildlife Coral Reef Conservation fund grant application has also been submitted.

We will be pleased to keep the Committee informed of our efforts and believe this resolution is not necessary.

Thank you for the opportunity to offer comments on this matter.



The Senate  
Committee on Public Safety and Intergovernmental and Military Affairs  
Committee on Agriculture and Environment  
Monday, March 25, 2024  
3:00 PM Conference Room 225  
State Capitol

### Testimony in Support of SCR27 and SR17

Aloha Chairs Wakai and Gabbard, Vice Chairs Elefante and Richards, and Members of the Committees,

The Coordinating Group on Alien Pest Species (CGAPS) is **in strong support of SCR27 and SR17, Encouraging the United States Navy to Eradicate Octocoral and Other Invasive Species from Pearl Harbor**, which encourages the United States Navy to eradicate two non-native octocorals commonly known as pulse coral (*Unomia stolonifera*) and Kenyan tree coral (*Capnella spicata*) and other invasive species in the waters of Pearl Harbor and encourages the Navy to allocate resources for that eradication.

In May 2023, DOD contractors mapped the pulse coral infestation and found that it was still contained within the harbor at that time, but that it was present across 60 acres and had spread across the channel into Kapelina Marina. Pulse coral is native to Indonesia and has been popular in the marine aquarium trade for decades. It is an extremely aggressive invader of reef habitats and has been devastating the reefs in Venezuela after an illegal aquarium introduction in the early 2000s. Pulse coral has since spread along 60 miles of the Venezuelan coast and 1.2 million square miles of seafloor in Mochima National Park with benthic coverage of 80 to 100 percent in some areas, overgrowing and killing bottom-dwelling species such as coral and seaweeds, and displacing the fish, crabs, and other species that rely on them. In 2013, Venezuela recorded 12 infestation sites and by 2022, this number had risen to 78 sites including offshore islands. It is an ecological disaster with no viable control technologies available across such a vast infestation. **Without a doubt, this is the most significant and imminent threat to Hawaii's reefs, and we must work together and make every effort to eradicate pulse coral.** The passage of this resolution will help echo and amplify this urgent message. Additional information and context are provided below, including some information on the other six non-native marine species that were found over the course of 2023.

In the fall of 2022, staff from Naval Facilities Hawaii and Pacific reached out to request help and advice for addressing an unidentified octocoral species near Bishop Point, near the mouth of Pearl Harbor. In response, CGAPS convened a Hawaii Invasive Octocorals Working Group (herein Octocorals Working Group) which has been meeting bi-monthly and in task-oriented subcommittees since January 2023 to support and advise the U.S. Navy's response to pulse coral in Pearl Harbor. At the very first meeting, this group agreed on the goal: *to eradicate*

*pulse coral from Pearl Harbor using adaptive management techniques.* The Octocorals Working Group includes Department of the Navy (NavFAC Hawaii and NavFAC Pacific) and participants from the University of Hawaii (CGAPS, the ToBo Lab at Hawaii Institute of Marine Biology, and the Cooperative Institute for Marine and Atmospheric Research in the School of Ocean and Earth Science and Technology), Department of Land and Natural Resources – Division of Aquatic Resources, Hawai'i Invasive Species Council, National Oceanographic and Atmospheric Administration (Pacific Islands Regional Office and Papahānaumokuākea Marine National Monument), U.S. Fish and Wildlife Service, United States Geological Survey – National Wildlife Health Center, Bishop Museum, and other experts in the field of aquatic invasive species (AIS) and octocorals.

Over the course of 2023, four additional non-native marine aquarium species were also found, two of which are known to be prolific in aquarium settings, and the locations of these infestations suggest that they were the result of at least two separate aquarium releases. One additional species, a corallimorph, was also detected but has not yet been formally identified. All five of the species detected in Joint Base Pearl Harbor Hickam waters are illegal to import and possess in Hawaii, and releasing pets into the environment is also illegal. Several of the species, including pulse coral, can spread by fragmentation and budding, drifting with bottom currents and attaching to new areas or even flotsam or vessels, if near enough.



*Pulse coral (Unomia stolonifera) in Pearl Harbor, the first record of this species in state waters, and believed to be the first in the U.S. Pulse coral overgrows and kills coral and seaweeds and displaces the reef creatures that rely on them. Pulse coral can spread by fragmentation and budding, drifting with bottom currents before reattaching. Photo: U.S. Navy*

To date, the Octocorals Working Group has advised and supported where possible but the infestation is within highly controlled DOD waters and all work has been by DOD contractors or dive units. Initial control efforts trialed on smaller areas have been successful. These techniques include hand removal in soft sediment in Kapelina, using tarps and sandbags to smother it in denser areas, and shrink wrap plastic to smother and kill it on pier piles. However, this infestation is very large and will require additional tools, techniques, and manpower. We must rely on the U.S. Navy to ensure that it has the funding, personnel, equipment, and processes in place to conduct this work immediately and for as many years as necessary.

Currently, there is a significant lack of funding and capacity, and partners have submitted multiple grant requests to other federal agencies including NOAA and US Fish & Wildlife. Our concern is that we may receive too little, too late, and the eradication of pulse coral alone will not be quick and easy, thus sustained funding and support will be necessary

until the very last pulse coral is eliminated. Based on this reality, CGAPS is in strong support of SCR27 and SR17. Mahalo for the opportunity and for considering our testimony.

Aloha,



Christy Martin  
CGAPS Program Manager



Andrew N. Porter  
CGAPS Legal Fellow





**LATE**

**Ali'i Pauahi Hawaiian Civic Club  
99-045 Nalopaka Place  
'Aiea, Hawai'i 96701**

TESTIMONY OF

Kehaulani Lum  
99-045 Nalopaka Place  
'Aiea, Hawai'i 96701

Before the

COMMITTEE ON PUBLIC SAFETY AND INTERGOVERNMENTAL AND MILITARY AFFAIRS  
and  
COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Hearing Date: Monday, March 25, 2024, 3:00 PM  
Conference Room 225 & Videoconference  
Hawai'i State Capitol  
415 South Beretania Street, Honolulu, Hawai'i 96813

In Consideration of

SCR 27 / SR 17  
Relating to Encouraging the United States Navy To Eradicate Octocoral And Other Invasive Species  
From Pearl Harbor

Aloha Chair Wakai, Vice Chair Elefante, Chair Gabbard, Chair Richards,

Mahalo nui loa for the opportunity to offer comments to SCR 27 / SR 17, S.B. 2329, which encourages the United States Navy to Eradicate Octocoral and Other Invasive Species from Pearl Harbor. My name is Kehaulani Lum, and I am the President of the Ali'i Pauahi Hawaiian Civic Club, which was chartered by the Association of Hawaiian Civic Clubs over 50 years ago. We are located in an ahupua'a of 'Ewa whose waters once fully flowed into Ke Awa Lau O Pu'uloa (Pearl Harbor). I am also an 8th generation descendant of native stewards of 'Aiea, and the great-great grandchild of the last caretaker of Kapākule, the fishing shrine at the entrance to Pu'uloa. Our love for the harbor runs deep.

Ali'i Pauahi supports the intent of this measure and respectfully requests the Committee's consideration of amendments that will strengthen a lasting and holistic remedy to truly eradicate this newest invasive species to enter the harbor.

Since 2014, Ali'i Pauahi and the community of 'Aiea has partnered with the U.S. Navy to restore Loko i'a Pā'āiau, one of the last remaining fishponds in the harbor, which is credited to have been built by Mō'i Wahine Kalanimanu'ia 500 years ago. The City and County of Honolulu has honored us for our efforts, and we have received two historic preservation awards from the Historic Hawai'i Foundation. We have also been featured in an award-winning documentary on loko i'a, Kai Piha: Nā Loko I'ā, which was created by Producer/Director Ann Marie Kirk and the Hawai'i State Department of Education and aired on PBS.

We are grateful to the authors of SCR 27 / SR 17 and thank the Committee for its concern for the health and well-being of the harbor and all of us who are striving in unity to restore the abundance of our precious native species. We also thank the Navy for its early and earnest efforts to address this foreign-introduced coral, as soon as it was discovered, and for its continued research into appropriate eradication methods.

Working alongside thousands of civilian and military student and adult volunteers every year, we remove several tons of invasive species which enter the pond from the uplands and on the tides. Through an indigenous lens, we look to the source of the illness, rather than its symptoms, alone, to ensure permanent healing, and further urge the pursuit of a response to the octocoral that is guided by all involved in its appearance, in the spirit of aloha.

We respectfully urge the Committees to ground your response in the vision of the Aloha Spirit Law which the body passed in 1986, and consider the following actions:

- 1) Akahai: Kindness (with Tenderness) – Rather than centering the response on only one agency, kindly invite the responsibility of contributing parties, through education and resources, to prevent the acquisition, distribution and, disposal of illegal octocorals (what is believed to be the source of the invasion). Ensure the creation of sanctuaries for safe disposal and an appreciation for mālama 'āina.
- 2) Lōkahi: Unity (with Harmony) - Nurture collaboration. We understand that the Navy has instituted a collaborative Octocoral Working Group that includes DLNR, CGAPS; Hawaii Department of Land and Natural Resources -Division of Aquatic Resources; United States Fish and Wildlife Service - Pacific Islands Fish and Wildlife Office, National Oceanic and Atmospheric Administration, National Marine Fisheries Service - Pacific Islands Regional Office; National Marine Fisheries Service - Pacific Islands Fisheries Science Center; US Geological Survey - National Wildlife Health Center; University of Hawaii - Hawaii Institute of Marine Biology (HIMB); Bishop Museum; and Williams College. Is a larger City-State-Federal scope possible?
- 3) 'Olu'olu: Agreeable (with Pleasantness) – Acknowledge the Navy and its partners' current success in the delicate removal of the octocoral and support eradication methods that may address the growth through natural means. Studies demonstrate that increased fresh water stops octocoral from growing. It also helps native species to thrive. Might an

increase in fresh water flow to the harbor, from currently diverted streams, accelerate the eradication?

- 4) Ha'aha'a: Humility (with Modesty). Act with openness and acceptance of our State's own potential need for remedies.
- 5) Ahonui: Patience (with Perseverance) – Move delicately and patiently to find the proper remedy. We have learned that the octocoral easily breaks into pieces and can drift into other areas, including the loko i'a. Also, that it thrives in the warming waters of climate change.

In deepest gratitude and willingness to support the removal of the octocoral through the restoration of our traditional systems, me ke aloha pumehana,

Kehaulani Lum

**SCR-27**

Submitted on: 3/20/2024 6:00:30 PM

Testimony for PSM on 3/25/2024 3:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Julia Estigoy-Kahoonei	Individual	Support	Written Testimony Only

Comments:

I support any bill that forces the military to do their part in cleaning up any damage they cause to our land and sea. They need to fulfillly their kuleana as entities of this place or get out

**SCR-27**

Submitted on: 3/21/2024 10:39:49 AM

Testimony for PSM on 3/25/2024 3:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Jacqueline S. Ambrose	Individual	Support	Written Testimony Only

Comments:

Aloha.

YES to- The House of Representatives concurring, that the United States Navy is encouraged to take responsibility for the eradication of octocoral and other invasive species from the waters of Pearl Harbor; and that the United States Navy is encouraged to allocate resources to eradicate octocoral and other invasive species from the waters of Pearl Harbor, including West Loch, Middle Loch, and East Loch

TESTIMONY OF  
**LARRY S VERAY**

TO THE COMMITTEE'S ON PUBLIC SAFETY AND INTERGOVERNMENTAL AND MILITARY  
AFFAIRS & AGRICULTURE AND ENVIRONMENT

**IN STRONG SUPPORT OF SCR 27 / SR 17**

**ENCOURAGING THE U.S. NAVY TO ERADICATE OCTOCORAL AND OTHER  
INVASIVE SPECIES FROM PEARL HARBOR**

**March 22, 2024**

Aloha, Chair's Wakai and Gabbard, Vice Chair's Elefante and Richards and Committee members. I am Larry Veray, Chairman for the Pearl City Neighborhood Board No. 21. I am submitting this testimony as an individual and believe the U.S. Navy should clean and eradicate the waters of Pearl Harbor of octocoral and other invasive species that cause a negative impact on the environment. Thank you for allowing me the opportunity to provide testimony in strong support of SCR27 / SR17.

Over many decades, the water in Pearl Harbor was not safe to swim or even wade in the water due to high mercury levels, accidental sewage discharges and chemicals being drained into the harbor for streams and storm drains. In addition, the U.S. Navy posted no fishing signs all around Pearl Harbor because it was not safe to eat the fish from the harbor. I can attest, back in the 70s, I was an avid shore fisherman and some of the fish that I caught had unusual tumors or what appeared to be cancerous growths as I filleted the fish. I never ate the fish.

Over the past five years, the U.S. Navy, University of Hawaii and others joined efforts and successfully planting Hawaiian oysters in various areas of Pearl Harbor where these oysters have cleaned bacteria, heavy metals, oil and other harmful pollutants from these waters. In addition, volunteers have cleared out mangroves returning Hawaiian fish ponds back to areas of Pearl Harbor. Hundreds of volunteers routinely clean the Historic Pearl Harbor Bike Trail keeping toxic material from being placed in the water of Pearl Harbor. All of the aforementioned positive initiatives, have had a great impact on improving the quality of water, appearance and beautification of Pearl Harbor. Now the Navy needs to take the lead in partnership with the community to eradicate the fast-growing octocoral and other invasive species negatively impacting the environment of Pearl Harbor.

It is the vision of the Pearl City Neighborhood Board No.21, who approved a resolution that recommends an agreement between the U.S. Navy and the City could open up areas of Pearl Harbor for recreational use by the public with paddle boarding, canoeing and other safe and controlled water activities because of a clean water environment in Pearl Harbor.

I most strongly urge you to pass SCR27 /SR 17. Mahalo!

*Larry S. Veray*