

# HAWAII STATE ENERGY OFFICE STATE OF HAWAII

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Testimony of  
**MARK B. GLICK, Chief Energy Officer**

before the  
**SENATE COMMITTEES ON AGRICULTURE AND ENVIRONMENT  
AND  
ENERGY AND INTERGOVERNMENTAL AFFAIRS**

Monday, February 9, 2026  
3:00 PM  
State Capitol, Conference Room 224 and Videoconference

Providing Comments on  
**SB 2373**

## **RELATING TO CARBON SEQUESTRATION.**

Chairs Gabbard and Wakai, Vice Chairs Richards and Chang, and Members of the Committees, the Hawai'i State Energy Office (HSEO) offers comments on SB 2373 that establishes a state goal to strengthen nature-based carbon emissions reduction solutions, directing certain state agencies to identify opportunities for investing in nature-based solutions that reduce carbon emissions, and authorizing the Hawai'i State Energy Office to develop methodologies to quantify carbon emissions reductions through marine ecosystem restoration and nature-based solutions.

HSEO agrees with the premise of SB 2373 to strengthen nature-based solutions that reduce carbon emissions and acknowledges that advancing carbon sequestration and emissions reduction is aligned with Hawai'i's long-term commitment to decarbonization.

HSEO also acknowledges its statutory focus placed by the Legislature pursuant to HRS 196-71 as the State's primary government entity for supporting the clean energy initiative and making progress on energy efficiency, renewable energy, and clean transportation goals. Furthermore, HRS 196-72, subsections (5) and (6) compel HSEO's Chief Energy Officer to identify market gaps and innovation opportunities,

collaborate with stakeholders, and facilitate public-private partnerships to develop projects, programs, and tools to encourage private and public exploration, research, and development of energy resources, distributed energy resources, and data analytics that will support the State's energy and decarbonization goals; and create and review proposed state actions that may have a significant effect on the State's energy and decarbonization goals, report to the governor their effect on the energy program, and perform other services as may be required.

Considering HSEO's statutory focus placed on energy and transportation sector solutions to reduce carbon emissions, HSEO respectfully deems a measure focused on nature-based solutions, including strategies such as marine ecosystem restoration, to fall outside of HSEO's statutory scope and core responsibilities. HSEO believes such efforts may be more appropriately led by agencies or research institutions with primary expertise and authority in this area and would recommend replacing HSEO with a more appropriate governmental or academic unit.

Thank you for the opportunity to testify.

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

SYLVIA LUKE  
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



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FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

**Testimony of  
RYAN K.P. KANAKA'OLE  
Acting Chairperson**

**Before the Senate Committees on  
AGRICULTURE AND ENVIRONMENT  
and  
ENERGY AND INTERGOVERNMENTAL AFFAIRS**

**Monday, February 9, 2026  
3:00 PM  
State Capitol, Conference Room 224**

**In consideration of  
SENATE BILL 2373  
RELATING TO CARBON SEQUESTRATION**

Senate Bill 2373 sets a State goal to enhance nature-based solutions for reducing carbon emissions. It directs specific State agencies to find opportunities for investing in solutions that cut carbon emissions. It authorizes the Hawai'i State Energy Office to create methods for measuring carbon reductions through marine ecosystem restoration and nature-based solutions. It also requires a report to be submitted to the Legislature. **The Department of Land and Natural Resources (Department) provides the following comments.**

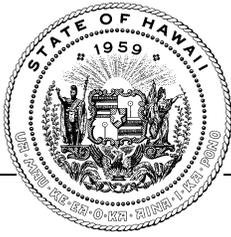
The Department advocates for nature-based solutions and their crucial role in carbon sequestration, aligning with the State's broader decarbonization efforts. When protected, restored, and sustainably managed, Hawai'i's forests and wetlands provide numerous public benefits, including watershed protection, biodiversity preservation, climate resilience, and risk mitigation from natural hazards. We strongly support recognizing nature-based climate solutions and emphasize the need to increase investment in forest and wetland management.

The Department also acknowledges that current carbon accounting programs and methods for forests, wetlands, and other nature-based solutions are already well established, peer-reviewed, and actively used at both national and international levels.

The Department advises against creating new methods for measuring carbon sequestration in wetlands and recommends that Hawai'i use and modify existing methods when suitable, rather than invent new ones.

The Department appreciates the Legislature's continued leadership in advancing natural resource stewardship and climate goals in Hawai'i.

Mahalo for the opportunity to comment on this measure.



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Statement of  
**MARY ALICE EVANS, Director**

before the  
**SENATE COMMITTEES ON AGRICULTURE AND ENVIRONMENT  
AND ENERGY AND INTERGOVERNMENTAL AFFAIRS**

Thursday, February 12, 2026, 3:10 PM  
State Capitol, Conference Room 224

in consideration of  
**SB 2373**  
**RELATING TO CARBON SEQUESTRATION.**

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

The Office of Planning and Sustainable Development (OPSD) **offers comments** on SB 2373, which authorizes the Hawai'i State Energy Office to develop methodologies to quantify carbon emission reductions through marine ecosystem restoration and other nature-based solutions, and to establish a state goal to strengthen nature-based carbon reduction strategies.

SB 2373 assigns the Energy Office responsibilities that extend beyond its core statutory mission, which focuses on energy policy, renewable energy deployment, grid resilience, and energy efficiency. Expanding the Energy Office's role to include land- and marine-based carbon accounting, ecosystem restoration metrics, and nature-based sequestration planning moves into areas traditionally aligned with land use planning, forestry, coastal management, agriculture, and ecosystem science. These functions are more appropriately situated within agencies responsible for natural resource management and statewide planning coordination.

OPSD has previously completed a comprehensive [feasibility study](#) in 2019, which evaluated the establishment of a state carbon offset program, including analysis of administrative complexity, cost, market viability, and alternative policy tools. The study concluded that offset programs can be costly and administratively burdensome with limited statewide impact compared to broader, integrated mitigation strategies.

Additionally, the State is already advancing carbon sequestration through existing initiatives, such as DLNR's Carbon Smart Land Program, which funds regenerative land practices and nature-based carbon reduction efforts. Establishing a new methodological mandate within the Energy Office risks duplication, increased administrative costs, and fragmented climate policy direction.

OPSD recommends leveraging existing statutory authorities, and programs rather than creating a parallel structure that may be unnecessary and costly.

Mahalo for the opportunity to testify on SB 2373.



FEBRUARY 9, 2026

## SENATE BILL 2373

CURRENT REFERRAL: EDT/AEN

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### POSITION: SUPPORT

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Imua Alliance supports SB 2373, relating to carbon sequestration, which establishes a state goal to strengthen nature-based carbon emissions reduction solutions; directs certain state agencies to identify opportunities for investing in nature-based solutions that reduce carbon emissions; and authorizes the Hawai‘i State Energy Office to develop methods to quantify carbon emissions reductions through marine ecosystem restoration and nature-based solutions.

Imua Alliance is a Hawai‘i-based organization dedicated to ending exploitation of both people and our planet. Accordingly, as the link between gender violence and the climate crisis is becoming clearer and more urgent, we support measures that advance Hawai‘i’s carbon sequestration efforts, especially regarding nature-based solutions.

#### **Nature-based solutions are essential for Hawai‘i’s climate strategy.**

Hawai‘i’s statutory climate goals envision a net-negative greenhouse gas emissions future. Nature-based solutions—including wetland, forest, and marine-based ecosystem protection and restoration—are recognized globally as cost-effective, durable approaches that both sequester carbon and enhance ecosystem services such as coastal protection, water filtration, and biodiversity habitat. According to the *World Resources Institute*, global commitments to nature-based solutions could deliver up to 37% of the greenhouse gas mitigation needed through 2030 to avoid the worst impacts of climate change.

**Marine ecosystems are particularly valuable carbon sinks.** Marine-based ecosystems sequester carbon at rates that can be up to five times greater than many terrestrial forests, while also providing shoreline protection against erosion, floods, and storm surge. These systems simultaneously support aquaculture and biodiversity that are foundational to Hawai‘i’s culture and economy. Studies in oceanic systems worldwide show that protecting and restoring coastal habitats can deliver lasting emissions reductions, while bolstering resilience to climate-related shocks.

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**Investing in maritime and coastal habitats builds multiple benefits.**

According to the *International Union for Conservation of Nature (IUCN)*, marine-ecosystem restoration can generate \$2,000–\$9,000 in societal benefits (carbon sequestration, fisheries, storm protection) per hectare per year, while conserving coral reef systems yields significant tourism, cultural, and food security benefits. Moreover, Hawai‘i is especially vulnerable to sea-level rise, shoreline erosion, and coral bleaching. Strengthening coastal ecosystems is thus both a mitigation and adaptation priority.

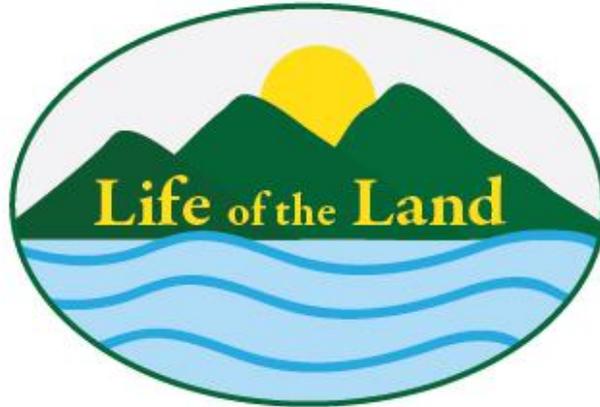
By authorizing the Hawai‘i State Energy Office to develop pathways to quantify carbon emission reductions from marine and other nature-based interventions, the bill creates an evidence base Hawai‘i can use to prioritize strategic investments in culturally response carbon sequestration initiatives. This proposal also directs agencies to identify opportunities for investing in nature-based carbon reduction, bridging science and public policy to inform future budget and regulatory decisions.

**Nature-based solutions are cost-effective and equitable.** A common theme among reputable climate assessments—including those from the Intergovernmental Panel on Climate Change (IPCC)—is that land- and ocean-based carbon management policies often deliver climate mitigation at lower marginal cost than many engineered approaches, particularly when co-benefits are accounted for. These co-benefits include improved water quality, enhanced fisheries, cultural preservation, indigenous stewardship, and expanded employment in ecosystem restoration. By investing in Hawai‘i’s forests, coastal wetlands, and marine systems, the state can support jobs in restoration and stewardship, while reducing our carbon footprint.

With aloha,

*Kris Coffield*

President, Imua Alliance



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COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Senator Mike Gabbard, Chair

Senator Herbert M. "Tim" Richards, III, Vice Chair

COMMITTEE ON ENERGY AND INTERGOVERNMENTAL AFFAIRS

Senator Glenn Wakai, Chair

Senator Stanley Chang, Vice Chair

DATE: Monday, February 9, 2026

TIME: 3:00 PM

PLACE: Conference Room 224

SB 2373 Carbon Sequestration

**COMMENTS**

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

Life of the Land is Hawai`i's own energy, environmental and community action group advocating for the people and `aina for 56 years. Our mission is to preserve and protect the life of the land through sound energy and land use policies and to promote open government through research, education, advocacy and, when necessary, litigation.

The bill states, "It shall be the goal of the State to strengthen nature-based solutions that reduce direct and indirect carbon emissions, including initiatives that promote carbon sequestration through marine ecosystem restoration."

That is a great goal.

A requirement would be far more effective.

We have been down this road before:

The Hawai`i State Legislature established the Carbon Farming Task Force in 2017, replaced it with the Hawai`i Greenhouse Gas Sequestration Task Force in 2018, defunded the task force, re-funded the task force, transferred it to the Office of Planning and Sustainable Development (OPSD), and then defunded it again. Without funding, the Task Force created Agriculture, Aquaculture, and Marine Use Permitted Interaction Groups (PIGs) that produced reports.

Henry Curtis  
Executive Director

The National Environmental Health Association (NEHA) represents more than 7,000 governmental, private, academic, and uniformed services sector environmental health professionals in the U.S., its territories, and internationally. This workforce represents the second largest constituent of the existing public health workforce, second only to nursing. We are the profession's strongest advocate for excellence in the practice of environmental health as we deliver on our mission to build, sustain, and empower an effective environmental health workforce.

## Policy Statement on Climate Change

*Adopted: July 2023*

*Policy Sunset: July 2028*

Climatic changes like rising temperatures, more extreme weather, and rising carbon dioxide (CO<sub>2</sub>) and sea levels are influencing environmental exposures that affect human health. These environmental exposures include air pollution, changes in vectorborne disease, increases in allergens and seasons when allergens are prevalent, water quality impacts, water and food supply, population displacement and relocation, environmental degradation, and the frequency and intensity of extreme heat and weather events. Not everyone is equally at risk for climate change-related health impacts. Risk can be influenced by age, economic resources, and location (Centers for Disease Control and Prevention [CDC], 2022).

Furthermore, one of the most comprehensive reviews of climate change research worldwide—and the largest assessment exercise in history—is being conducted by the Intergovernmental Panel on Climate Change (IPCC), which is made up of independent working groups that examine both peer-reviewed publications and gray literature. The 6th IPCC systematic review of the applicable published literature and the assessment reports for the public and policymakers is current and clear: “It is unequivocal that human influence has warmed the atmosphere, ocean, and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere, and biosphere have occurred” (IPCC, 2021, p. 4).

NEHA recognizes climate change as a global environmental health problem that has health and safety impacts on individuals and communities. Environmental health professionals improve and protect the public's health and create healthy and sustainable communities. NEHA supports building the capacity of environmental health professionals to address the health impacts of climate change with risk assessment, adaptation, and mitigation planning. Developing successful solutions to climate change has implications for the structure and viability of the U.S. economy, as well as global economic impacts that affect the health and welfare of people worldwide.

NEHA supports federal, state, local, tribal, and territorial (SLTT) jurisdictions in developing policies, using frameworks, and implementing plans to address climate and health, including

technical assistance and training, some through mini-grants and direct funding, to accomplish the following:

- Conduct risk assessments and establish plans to anticipate risks for adaptation and resilience building for future generations. Using the audience segmentation techniques identified by Maibach et al. (2008) can help professionals refine individual risk perceptions. Climate change and health equity are at the cutting edge of these assessments of risks to vulnerable populations.
- Incorporate green space, green roofs, energy conservation, and other technologies into the built environment to help reduce the effects of urban heat islands. Urban areas are warmer than adjacent rural areas due to the absorption of sunlight (Seto et al., 2012; U.S. Global Change Research Program [USGCRP], 2016). In the short-term, heat waves pose the greatest threat to the environment and human health due to impaired air quality and heat-related illnesses in vulnerable populations including older adults, individuals with chronic diseases, low-income populations, outdoor laborers, etc. (U.S. Environmental Protection Agency [U.S. EPA], 2022; Watts et al., 2015).
- Conserve and replenish fresh water sources and support planning and implementation activities to mitigate climate change-related health impacts on water sources. According to the U.S. Geological Survey (n.d.), climate change poses increased risks of prolonged droughts, making them more frequent, more severe, and of longer duration. Droughts can have short- and long-term health implications, led by the devastating impacts of wildfires. Possible long-term public health impacts include drinking water scarcity and decreased water quality, poor air quality, increased wildfire impacts, degraded sanitation and hygiene, impacts on food supplies and nutrition, and an increase in vectorborne disease (CDC, 2022). The U.S. Environmental Protection Agency (U.S. EPA, 2023a) estimates that more than one half of the U.S. population relies on groundwater for domestic use. Wildfires impact water quality, as shown by the devastating effect of the Colorado wildfires in Boulder and surrounding counties. Droughts—forecasted to worsen with climate change—can have a significant impact on existing groundwater supplies through decreased aquifer recharge and increased pumping (Taylor et al., 2013).
- Address the need for more funding and coordinated data bank repositories for state and local governments that are designed for collaborative use by jurisdictions. In the decades-long-term future, climate change poses an increased risk of changes in the extent and volume of sea ice; significant changes in sea levels, water temperatures, ocean acidification, and freshwater chemistry; increased coastal flooding and erosion and impacts on infrastructure; expansion of the range of disease vectors; and geographic spread of tropical diseases.

NEHA supports the following policies and actions for environmental health professionals:

- Adopt a multidisciplinary approach to address action on climate change. The Commission on Health and Climate Change has produced 10 policy recommendations



that can serve as a broad reference base for environmental health professionals to make incremental changes at their associated levels of community (Watts et al., 2015).

- Create a “whole community” engagement approach to engage and empower the entire community, all levels of government, nongovernmental organizations, nonprofits, faith-based organizations, and private sector industries established through the Federal Emergency Management Agency and the U.S. Department of Homeland Security (Federal Emergency Management Agency, 2011).
- Strengthen community resilience to climate-related events. Due to local culture and capacity, there is no single solution to climate change adaptation, but there are resiliency frameworks, such as the one developed by the U.S. Department of Health and Human Services, that can be used by environmental health professionals (Chandra et al., 2011).
- Collect baseline disease rates and examine exposure-outcome associations to quantify the impacts of climate change on health and determine direct attribution (Marinucci et al., 2014). Climate change hazards might exacerbate existing health disparities over time due to the changing density and demography of populations. Support for surveillance activities will allow better monitoring for change over time. U.S. EPA (2023b) has developed more than 50 climate change indicators that can help environmental health professionals to better examine and assess these risks in their own communities.
- Reduce barriers, share best practices, and evaluate metrics through stakeholder engagement strategies similar to those activities proposed by Bierbaum et al. (2013).
- Work with the Climate and Health Program within the Centers for Disease Control and Prevention to assist health departments in developing states and cities that are climate ready. The five-step process framework from CDC—Building Resilience Against Climate Effects (BRACE)—anticipates impacts, assesses health vulnerabilities, and creates adaptive capacity to reduce exposures and disease (Managan et al., 2014).

## Analysis

In 1997, NEHA adopted a climate change position statement that acknowledged the gravity of climate change, as well as the need for legislation and research, concerted action and cooperation, and the deployment of environmental and public health professionals to be resources (Radtke et al., 1997). Since then, additional evidence of climate change has documented the seriousness of regular, worldwide climate change impacts. This policy statement continues to address the fundamental objectives of NEHA.

This policy statement is updated and portrays current information on the status of the climate change crisis with particular emphasis on the implications for environmental and public health. It is intended to be used as a basis for environmental health professionals and their colleagues to initiate discussions within their communities regarding the potential impacts and vulnerabilities of climate change and develop solutions to issues and opportunities. Environmental health professionals are vital partners in developing climate change mitigation



and adaptation measures.

NEHA recognizes climate change as a worldwide environmental health crisis caused in part by human influences. Climate change has serious health and safety impacts on individuals and communities. While initially referred to as global warming, climate change is a more recent term that identifies significant changes in climate trends and measures lasting for an extended period of time, such as changes in temperature, precipitation, or wind patterns (U.S. EPA, 2023c). Greenhouse gases (i.e., CO<sub>2</sub> from burning coal, oil, and natural gas; nitrous oxide; methane) in the atmosphere absorb solar radiation and emit it back to the Earth's surface, which plays a significant role in triggering the climate changes observed in recent decades (U.S. EPA, 2023d). Therefore, energy policy, including the electric utility generation mix, has been at the leading edge of public policy. Progress has been slow, however, similar to the evolution of electric airplanes and cars becoming a dominant force in transportation. These changes can take decades, even though the market and our knowledge are always dynamic and in real time.

## Justification

Weather-related disasters occur throughout the U.S. and abroad each year. Based on the latest data in 2022, extreme events are growing in intensity and cost, fueled in part by the Earth's changing climate. The sum of leading research across the globe continues to confirm that human activities contribute to increasing levels of CO<sub>2</sub> in the atmosphere. Shifting weather patterns are impacting food production, rising sea levels, and increased rainfall events, which increase the risk of catastrophic flooding, wildfires, droughts, intensified storm events, and other related consequences. These climatic fluctuations are also leading to significant disparities within the U.S. and internationally.

According to the World Health Organization, climate change adversely affects human health. One example is that federal healthcare expenditures are increasing due to climate-related impacts (U.S. Government Accountability Office, 2015). Health effects include increased respiratory and cardiovascular disease, as well as injuries and premature death (CDC, 2022).

The U.S. average temperature has increased by 1.3–1.9 °F since 1895 with most of the increase (not geographically uniform) happening since 1970 (USGCRP, 2016). The percentage of people diagnosed with asthma has increased in the U.S. from 7.3% in 2001 to 8.4% in 2010 (CDC, 2022). In the U.S., an average of 702 heat-related deaths and 67,512 emergency department visits occur annually due to heat (CDC, 2023).

The benefits far outweigh the economic consequences of delaying the implementation of climate change mitigation and adaptation policies. It will be costly either way, but the costs of delayed action are more costly as higher temperatures and higher CO<sub>2</sub> concentrations continue. Policies now can avoid more costly fixes in future years (Furman & Podesta, 2014).

Addressing climate change can be an overwhelming and daunting task, but when all individuals in a community engage, prepare, and collaborate on effective climate change strategies, partnerships and solutions arise that can lead the way in the design of solutions. Evaluating



baseline opinions, values, core beliefs, and identities of a community's diverse population can allow environmental health professionals to better understand how and where behavior change can produce maximum positive results. Promoting long-term planning for climate change is important. Communities must create and be examples of how to live more efficient and sustainable lifestyles, such as using mass transportation, reducing waste, and conserving energy and water. Environmental health professionals can lead the way.

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**Drafted in 2020 by the NEHA Climate and Health Committee**

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Michael A. Pascucilla, MPH, REHS, DAAS

CEO/Director of Public Health, East Shore District Health Department

Leon Vinci, DHA, RS, DAAS

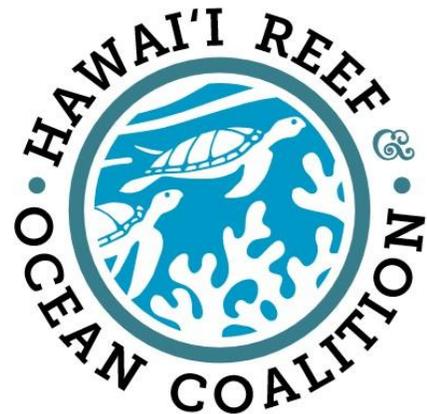
Founder and CEO, Health Promotion Consultants

**Edited by:**

Kristen Ruby-Cisneros

Managing Editor, *Journal of Environmental Health*





To: The Honorable Chairs Mike Gabbard and Glenn Wakai, the Honorable Vice Chairs Herbert M. “Tim” Richards, III, and Stanley Chang, and Members of the Committees on Agriculture and Environment and Energy and Intergovernmental Affairs.

From: Climate Protectors Hawai'i and Hawai'i Reef and Ocean Coalition (by Ted Bohlen)

Re: **Hearing SB2373 RELATING TO CARBON SEQUESTRATION**

Hearing: Monday, February 9, 2026 3:00 p.m. CR224

Aloha Chairs Gabbard and Wakai, Vice Chairs Richards and Chang, and Members of the Committees on Agriculture and Environment and Energy and Intergovernmental Affairs.

The Climate Protectors Hawai'i seeks to educate and engage the local community in climate change action.

The Hawai'i Reef and Ocean Coalition (HIROC) is a group of scientists, educators, filmmakers and environmental advocates who have been working since 2017 to protect Hawaii's coral reefs and ocean.

The Climate Protectors Hawai'i and the Hawai'i Reef and Ocean Coalition **SUPPORT SB2373!**

As an ocean state, Hawai'i is particularly vulnerable to the effects of climate heating, including hurricanes, rain bombs, wildfires, drought, sea level rise and beach loss. Hawai'i

has established a legal target of sequestering more atmospheric carbon than it emits as soon as practicable and not later than 2045.

This bill would help move toward achieving that target by establishing a State goal to strengthen nature-based carbon emissions reduction solutions. It directs certain state agencies that oversee natural resource management and carbon sequestration to identify opportunities for investing in nature-based solutions that reduce carbon emissions, including through marine ecosystem restoration. It authorizes the Hawai'i State Energy Office to develop methodologies to quantify carbon emissions reductions through marine ecosystem restoration and nature-based solutions.

Please pass this bill to help reduce atmospheric carbon in Hawai'i!

Mahalo!

Climate Protectors Hawai'i and Hawai'i Reef and Ocean Coalition (by Ted Bohlen)

To: Senator Mike Gabbard, Chair  
Senator Herbert M. "Tim" Richards, III, Vice Chair  
Committee on Agriculture and Environment

Senator Glenn Wakai, Chair  
Senator Stanley Chang, Vice Chair  
Committee on Energy and Intergovernmental Affairs

From: Veronica Moore, Individual Citizen

Date: February 11, 2026

RE: Senate Bill 2373  
Measure Title: RELATING TO CARBON SEQUESTRATION.  
Report Title: HSEO; Nature-Based Carbon Sequestration; Carbon Emissions;  
Marine Ecosystem Restoration; Report

To All Concerned,

My name is Veronica Moore and I support Senate Bill 2373. Thank you for introducing this bill.

Sincerely,

Veronica M. Moore