

Dear Madam Chair Lowen,

I, Kaelah Kimura, a 10th grader at Punahou School, am writing in strong support of HB410.

I grew up with a love for the ocean and for the nature all around us. This led me to a passion for advocating for climate action. I, like many other likeminded kids my age, am scared that we won't make enough change before it's too late. That's why I believe measures like HB410 is so important.

My generation is quick to learn that our futures are at risk, but not so quick to learn what to do about it. In the age of social media, it's easy to repost a photo saying what we need to do for the climate, but not so easy to do what needs to be done. However, if it were part of the mandatory public school curriculum to plant 30 or more trees in the eighth and twelfth grade, that solution would be right at this generation's fingertips.

Many studies show that to avoid the 2° C temperature increase (which would catapult the planet into a climate catastrophe) we need to be removing billions of tons of CO2 each year. According to the Arbor Day Foundation, mature trees can absorb 48 pounds of CO2 from the atmosphere each year. Since more efficient CO2-removal technology is not yet readily available, trees are a great way to begin to make an impact on lessening the CO2 levels in our atmosphere.

This measure proposes that an effort is made to have students plant trees indigenous to Hawai'i. This will strengthen the native ecosystem and rebuild native plant populations. Native birds, snails, and other animals (many of which are endangered) rely on native tree species as food and habitat resources. However, native plant species populations have decreased as temperatures and weather patterns become more irregular as they can't adapt to different environments since most are endemic to Hawai'i. The planting of native trees will help to strengthen these collapsing populations.

Having public school students take on the task of tree planting will inevitably inspire similar action in their parents, communities, and other schools resulting in statewide tree planting action.

It's time that students be given the opportunity to solve climate change, not just the fear. I urge you and your committee to support HB410.

Mahalo Nui Loa,
Kaelah Kimura



**WRITTEN TESTIMONY OF
THE DEPARTMENT OF THE ATTORNEY GENERAL
THIRTY-FIRST LEGISLATURE, 2021**

ON THE FOLLOWING MEASURE:

H.B. NO. 410, RELATING TO TREE PLANTING.

BEFORE THE:

HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

DATE: Tuesday, February 9, 2021 **TIME:** 9:00 a.m.

LOCATION: State Capitol, Room 325, Via Videoconference

TESTIFIER(S): **WRITTEN TESTIMONY ONLY.**
(For more information, contact Lori N. Tanigawa,
Deputy Attorney General, at 586-0618)

Chair Lowen and Members of the Committee:

The Department of the Attorney General provides the following comments.

The purpose of this bill is to amend chapters 302A and 304A, Hawaii Revised Statutes by adding sections to require that eighth grade students and twelfth grade students in Hawaii public schools, along with University of Hawaii undergraduate students, plant trees.

Section 6 of article X of the Hawai'i State Constitution, gives the University of Hawai'i Board of Regents "exclusive jurisdiction over the internal structure, management, and operation of the university." Section 6 further provides: "This section shall not limit the power of the legislature to enact laws of statewide concern." The legislature shall have the exclusive jurisdiction to identify laws of statewide concern." If the Committee decides to pass this bill, we recommend an amendment that adds a statement identifying this bill as a law of statewide concern.

Additionally, the Committee should correct the misspelling of "trees" at page 2, line 15, and page 3, line 10.

Thank you for the opportunity to provide these comments.



UNIVERSITY OF HAWAII SYSTEM

Legislative Testimony

Testimony Presented Before the
House Committee on Energy and Environmental Protection
Tuesday, February 9, 2021, at 9:00 a.m.

by
Debora Halbert, Associate Vice President for Academic Programs & Policy
University of Hawai'i System

HB 410 – RELATING TO TREE PLANTING

Chair Lowen, Vice Chair Marten, and members of the Committee:

Thank you for the opportunity to testify on this bill.

The University of Hawai'i (University) appreciates the intent of HB 410, which requires that eighth grade students and twelfth grade students in Hawai'i public schools, along with University of Hawai'i undergraduate students, plant trees.

The University understands and appreciates the importance of planting trees and supports the preference for indigenous plantings. We are proud of the work of Dr. Camilo Mora of our faculty, who has mobilized thousands of volunteers including students of all ages to plant trees in order to achieve carbon neutrality. And we are aware there are other tree-planting initiatives supported by public, private and non-profit organizations.

However, we cannot support the approach of making participation in tree-planting a requirement for graduation. In general, we are working hard to help more students graduate on time rather than to create more requirements that may present obstacles for students, such as those with disabilities and distance learners, or that may delay graduation for many more.

In addition, the University is not financed or equipped to address the physical or administrative requirements that this bill would present. Especially in a time of diminishing resources, we cannot support what would likely become a new unfunded or underfunded mandate.

To achieve the worthy goals of this measure, the sponsors might wish to investigate how to support and promote existing and volunteer tree planting initiatives across the islands.

The University respectfully requests that this measure be amended to remove the University from its requirements or deferred entirely.

HB-410

Submitted on: 2/7/2021 10:07:33 PM

Testimony for EEP on 2/9/2021 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Matthew Geyer	Faith Action Environmental Justice Task Force	Support	No

Comments:

The Environmental Justice Task Force of Faith Action supports the goals and ideas behind this measure, and hope to learn more details about how it will be implemented.

HB-410

Submitted on: 2/8/2021 5:07:22 AM

Testimony for EEP on 2/9/2021 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Kamuela Werner	Individual	Support	No

Comments:

Aloha:

I am in strong support of HB 410 which would require that eighth grade students and twelfth grade students in Hawaii public schools along with University of Hawaii undergraduate students plant trees. As a native Hawaiian dryland forest conservationist and tropical fruit tree enthusiast, I deeply agree with the legislature's finding that pursuing educational programs and projects that promote environmental protection, biodiversity, and climate change mitigation helps youth and young adults to cultivate socially responsible and conscious citizenry. To truly protect Hawaii's fragile ecosystems, we need residents to be more firmly rooted and active in its preservation--planting trees is an intimately tangible way to nurture that endeavor. Passing HB 410 is also a potential step towards greater food security for our state.

Me ke aloha,

Kamuela Werner



STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

Date: 02/09/2021

Time: 09:00 AM

Location: 325 Via Videoconference

Committee: House Energy &
Environmental Protection

Department: Education

Person Testifying: Dr. Christina M. Kishimoto, Superintendent of Education

Title of Bill: HB 0410 RELATING TO TREE PLANTING.

Purpose of Bill: Requires that eighth grade students and twelfth grade students in Hawaii public schools along with University of Hawaii undergraduate students plant trees.

Department's Position:

The Hawaii State Department of Education (Department) offers the following comments on HB 410 regarding specific grade level mandate for tree planting.

The Department agrees that educational endeavors around environmental protection, biodiversity, and climate change mitigation are critical for youth to cultivate science literacy and socially conscious citizenry and the Department is deeply committed to 'āina-based education. To that end, the Department adopted the Next Generation Science Standards (NGSS) in 2016. There is a clear trajectory of building developmentally appropriate student understanding of topics such as climate and human impacts on the environment from kindergarten through high school. In addition, climate change and other topics of human-environment interaction are specifically addressed in the Hawaii Core Standards for Social Studies.

The Department's school design strategy prioritizes a flexible and adaptive approach, empowering each school to make decisions about specific contexts and partnerships for developing high quality and relevant learning experiences based on the needs of their students and the local community. It is through this lens that schools are able to creatively address 'āina-based educational programs and projects that promote environmental protection, biodiversity, and climate change mitigation.

The Department recognizes that there are multiple approaches to building student scientific and environmental literacy and taking informed action on environmental issues. While planting trees is one such approach, the target rate of thirty trees planted by every 8th- and 12th-grade student, about 14,000 students per grade level, would be 840,000 trees to be planted each year. Knowing that approximately 68% of our student population is on Oahu, the logistics and space for tree planting at such a rate would need to be considered.

Finally, discussions regarding how the Department can increase sustainability practices are already in motion. Recent considerations include a focus on how to enrich the landscape of the school grounds with the use of indigenous plants, replacing invasive plants and allowing for cultural teaching through ceremonial or food gardens. The Department is committed to the United Nations' Sustainable Development Goals and is contributing to the Hawaii 2050 Sustainability Plan.

The Department respectfully requests that if HB 410 is passed, it does not replace the professional judgment for learning activities by our teachers and instructional leaders or adversely impact priorities approved by the Hawaii State Board of Education.

The Department defers to the University of Hawaii regarding section 3 of the bill.

Thank you for this opportunity to provide testimony on HB 410.

The Hawai'i State Department of Education is committed to delivering on our promises to students, providing an equitable, excellent, and innovative learning environment in every school to engage and elevate our communities. This is achieved through targeted work around three impact strategies: school design, student voice, and teacher collaboration. Detailed information is available at www.hawaiipublicschools.org.

HB-410

Submitted on: 2/8/2021 8:28:07 AM

Testimony for EEP on 2/9/2021 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Kawika Riley	Kupu	Support	No

Comments:

Aloha Chair Lowen, Vice Chair Marten, and Honorable Members of the Energy and Environmental Protection Committee,

Kupu is pleased to testify in strong support of H.B. 410, which would provide the dual benefit of increasing tree planting and increasing the integration of natural resource knowledge into Hawai'i's education system. As a youth-focused conservation organization we see the need for increased environmental resoration as well as education that incorporates mālama 'āina. We also see, as part of our ongoing community programming, that such approaches benefit youth, their education, and their environment. We also greatly appreciate the emphasis on Native plants, which are currently underutilized despite their many benefits to the ecosystem.

Mahalo for this opportunity to testify in support of H.B. 410.

Mālama Pono,

Kawika Riley

Senior Director of External Affairs, Kupu

LATE

HB-410

Submitted on: 2/8/2021 9:26:34 AM

Testimony for EEP on 2/9/2021 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Joshua Atwood	DLNR	Oppose	No

Comments:

I would like to provide comments via Zoom

LATE



Written Testimony before the

HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Tuesday, February 9, 2021 (9:00 am)

RE: HB410 RELATING TO TREE PLANTING.

Chair Lowen, Vice Chair Marten, Members of the Committee on Energy & Environmental Protection:

Trees for Honolulu's Future (TFHF) is a non-profit organization with a vision for a tree-filled island that preserves and enhances our quality of life, especially in the face of climate change. Our particular focus is increasing the urban tree canopy within Honolulu to secure the myriad benefits trees bring to people and the environment.

While we support the intent of this bill, planting trees, especially at the scale envisioned in this measure, is extremely complex and requires many resources. Beyond species selection, which the bill mentions in passing, there needs to be adequate nursery stock, suitable planting areas, and a short and long-term maintenance/care plan. To be effective, training or requirements for qualified arborists to assist and supervise must occur so each 8th, 12th grader and university student learns how to properly plant the trees and provisions made to care for them until established, a process that takes years. These critical steps must be identified and made part of the bill in order to paint a realistic picture of what trees need to thrive. The average cost to conduct site preparation and plant a seedling can be approximately \$90, but planting and establishing an appropriately larger tree in an urban environment can cost over \$800. More importantly, the cost of critical early establishment care to ensure successful survival and growth of a safe, healthy tree must be allocated and can be over five times this cost. In fact, TFHF's extensive experience with these types of very well-intended planting programs have found that survival rates are very, very poor due to the lack of professional arboricultural knowledge, training and critical, ongoing early establishment care required for successful tree plantings.

Even though the current language in HB410 states that the DOE/UH may coordinate with other departments or nonprofit organizations, we suggest it would be more appropriate and efficient for these education institutions to have a service requirement. Such an approach could potentially span many community needs. For instance, students could work with the State Department of Land & Natural Resources or nonprofits that have the expertise and demonstrably successful programs to plant trees and address the aforementioned costs and establishment requirements.

HONOLULU is HOT TREES are COOL

Visit us: www.TreesForHonolulu.org Contact us: info@TreesForHonolulu.org Voice/Fax/Text: 808-707-6353
P.O. Box 12051, Honolulu, Hawaii 96828

Written Testimony by Trees for Honolulu's Future before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
HB410 RELATING TO TREE PLANTING
Page 2 of 2

We do note, however, that the Legislature mandating such a service requirement may be problematic in inserting itself into the curriculum responsibilities of the Department of Education (DOE) and the University of Hawaii. Moreover, it is essential to ensure any legislative mandate is properly funded. Provide the resources and the results will follow.

Another approach could be to reduce the requirement to 10 seedlings per person, this is the amount mandated in the Philippines for graduating students and matches what one person can typically easily carry. The U.S. Forest Service uses recycled paper dibble tubes with a special step on hole digger for this kind of large-scale reforestation effort. Do note that this approach still would require proper species and site selection, training, and appropriate maintenance plan plus funding. We say for all tree plantings: **Right Tree. Right Place. Right Care.**

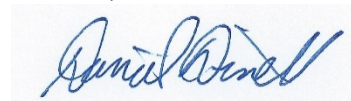
Planting trees provide a wonderful opportunity, as some schools have realized, to link to curriculum. Trees for Honolulu's Future submitted a grant-in-aid (GIA) proposal in the 2020 legislative session to do exactly this by:

- 1) Identifying 14 public schools on Oahu to pilot an approach to tree plantings that includes NGSS curriculum for elementary schools and provide a "recipe" with detailed instructions for other schools to emulate: and
- 2) Updating the decades old State DOE tree manual and guidance on landscape management to industry standard.

We understand that, due to budgetary constraints, like in 2020, no GIAs will be awarded this year, however, we do point out, that GIAs are often the most cost-effective way for the Legislature to achieve its policy goals.

We ask that this bill either be amended in the way we describe above before being passed to the next Committee or held. We also stand ready to assist the Legislature in furthering the well-intended direction of this, and other legislation, to increase trees in our island home.

Mahalo,



Daniel Dinell
President

LATE

HB-410

Submitted on: 2/9/2021 7:23:49 AM

Testimony for EEP on 2/9/2021 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
heather mcmillen	DLNR	Support	No

Comments:

I am available for comments. Please allow me Zoom access.