



**OFFICE OF PLANNING
STATE OF HAWAII**

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: <http://planning.hawaii.gov/>

DAVID Y. IGE
GOVERNOR

MARY ALICE EVANS
DIRECTOR
OFFICE OF PLANNING

Statement of
MARY ALICE EVANS
Director, Office of Planning
before the
HOUSE COMMITTEE ON WATER, LAND, AND HAWAIIAN AFFAIRS
Wednesday, March 11, 2020
9:00 AM
State Capitol, Conference Room 325

in consideration of
SB 2077, SD 2
RELATING TO THE ENVIRONMENT.

Chair Yamane, Vice Chair Todd, and Members of the House Committee on Water, Land, and Hawaiian Affairs:

The Office of Planning (OP) **supports** this proposed tree planting program described in SB 2077, SD 2. The proposed Hawai'i tree planting program will be administered by the Department of Land and Natural Resources for the planting of at least 1 million native trees in the state per year. The proposed Hawai'i tree planting program is required to be a partnership between the Hawai'i forest stewardship program, the Kaulunani urban and community forestry program, the state's greenhouse gas sequestration task force, and any county or nonprofit entity.

The Office of Planning thanks the Legislature for adding the state's greenhouse gas sequestration task force as a partner in this endeavor.

The Office of Planning finds this proposed tree planting program complimentary with the objectives and responsibilities of the State's Greenhouse Gas Sequestration Task Force, which is administratively attached to the Office of Planning, pursuant to Section 225P-4, Hawai'i Revised Statutes.

The Office of Planning appreciates the opportunity to provide testimony in support of SB 2077, SD 2.

DAVID Y. IGE
GOVERNOR OF
HAWAII



**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES**

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
FIRST DEPUTY

M. KALEO MANUEL
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
SUZANNE D. CASE
Chairperson**

**Before the House Committee on
WATER, LAND, & HAWAIIAN AFFAIRS**

**Wednesday, March 11, 2020
9:00 AM
State Capitol, Conference Room 325**

**In consideration of
SENATE BILL 2077, SENATE DRAFT 2
RELATING TO THE ENVIRONMENT**

Senate Bill 2077, Senate Draft 2, proposes to appropriate funds to the Department of Land and Natural Resources (Department) to establish a tree planting program in the State. **The Department supports this measure provided that's its passage does not replace or adversely impact priorities in the Executive Supplemental Budget request, and provides the following comments and proposed amendments.**

The Department recognizes that trees are our strongest allies for addressing the climate crisis, and that beyond carbon sequestration there are multiple other ecological and human health benefits of trees. Further, there are numerous areas managed by the Department that need additional tree planting to improve overall watershed and forest health. The Department notes that the goal of one million trees per year is ambitious given our current capacity, but believes this is an attainable goal if supported through public-private-community partnerships.

Additionally, to successfully reach this scale, the program would need to include state agencies responsible for managing land where trees could be planted. Expanding the program to include agricultural and conservation lands in addition to urban, peri-urban, and rural areas will increase the opportunity to meet this goal. The Department thus proposes the following amendments:

SECTION 1. (a) There is established the Hawaii tree planting program to be administered by the board of land and natural resources for the planting of at least one million appropriate non-invasive trees in the State per year. The Hawaii tree planting program shall expand the conservation, agricultural, urban, peri-urban, and rural

tree canopies throughout the State, and preference shall be given to planting native trees where appropriate.

(b) The Hawaii tree planting program shall be a partnership between:

- (1) The Hawaii forest stewardship program of the department of land and natural resources;
- (2) The Kaulunani urban and community forestry program of the department of land and natural resources;
- (3) The greenhouse gas sequestration task force of the office of planning; and
- (4) Any appropriate county or nonprofit entity as determined by the chairperson of the board of land and natural resources; provided that the chairperson of the board of land and natural resources shall invite any appropriate county, or nonprofit, or other land-managing entity to participate in the program.

~~[(d) The Hawaii tree planting program shall cease to exist on.]~~

To begin building capacity needed to successfully complete tree planting projects requires an increase in seed collection and storage facilities; enhanced efficiencies at nurseries; expanded tree planting and maintenance personnel; etc. The Department anticipates needing additional personnel resources and operational funds. Initially, two program positions (Program Specialist V and Forester IV) are needed to quantify current capacity, identify and engage partners, develop funding opportunities, and coordinate projects under the program. The Department has identified a need for approximately \$900,000 in recurring operational funds to scale-up tree planting on its forest and natural area reserves, and with additional funding could expand the proposed program for lands within urban, peri-urban, rural, agricultural, and conservation areas. In addition, \$1.3 million is needed for state tree nursery improvements to increase the scale at which we are able to produce tree seedlings for planting projects.

Finally, the tree planting program will be more successful at increasing the rate tree establishment and survival if a minimum of five years of maintenance and care for newly planted trees is funded at a cost of \$200,000 per year

To start work under this program, the Department would need a total of \$2.4 million, which includes the two additional positions. More funding would be needed over time as the project scales up to reach 1 million trees per year.

Thank you for the opportunity to comment on this measure.



**Conservation Council
for Hawai'i**

Hawai'i's voice for wildlife

Kō Hawai'i leo no nā holoholona lōhiu



**Submitted to the House Committee on Water, Land and Hawaiian Affairs
Hearing: March 11, 2020, 9:00am
Conference Room 325
SB2077, SD2
Relating to the Environment**

Conservation Council for Hawaii (CCH) supports SB2077 SD2 with the following comments.

CCH supports a tree planting program across the state of Hawai'i, managed under the Department of Land and Natural Resources (DLNR). This undertaking is daunting to the capacity of DLNR and CCH supports public-private partnerships with appropriate organizations to ensure the success of this program. CCH supports the use of native and non-native trees so long as non-native species are non-invasive and there is a history of the trees survival and presence in the areas being planted. CCH would like to see an actual budget amount set under Section 2. *There is an appropriation out of the general revenues of the State of Hawai'i the sum of \$___, for the tree planting program and that the Act take effect sooner than the slated December 31, 2033.* CCH additionally supports trees being planted on conservation, agricultural, and in urban areas as deemed appropriate and necessary by DLNR.

Thank you for the opportunity to submit testimony in support of SB2077 SD2.

**Telephone/Fax: 808.593.0255 | email: info@conservehi.org | web:
conservationcouncilhawaii.org**

P.O. Box 2923 | Honolulu, HI 96802 | Office: 250 Ward Ave. Suite 215 | Honolulu, HI 96814

President Rachel Sprague | Vice President: Lisa Hinano Rey | Secretary: Julie Leialoha

Treasurer: Sunshine Woodford | Directors: Robin Kaye, Steven Lee Montgomery

National Wildlife Representatives: Les Welsh, Rachel Sprague

Executive Director: Moana Bjur | Operations and Events Director: Jonnetta Peters





SIERRA CLUB OF HAWAI'I

HOUSE COMMITTEE ON WATER, LAND, AND HAWAIIAN AFFAIRS

March 11, 2020

9:00 AM

Room 325

In **SUPPORT** of **SB2077 SD2**: Relating to the Environment

Aloha Chair Yamane, Vice Chair Todd, and members of the committee,

On behalf of our 20,000 members and supporters, the Sierra Club of Hawai'i **supports SB2077**, which would establish and appropriate funding for a 4-year tree planting program under the Department of Land and Natural Resources.

For the last fifty years, the Sierra Club of Hawai'i has been leading hikes and service projects throughout the Hawaiian Islands to restore and maintain native ecosystems. In 2019, we launched our "Mālama Tree Crew" program to allow our supporters to enjoy the outdoors, increase their impact in the fight against climate change, and learn best practices for native tree maintenance.¹ Through partnerships with the state, non-profit, and community groups, Sierra Club volunteers participate in monthly work days to water, weed, and clear debris around recently planted trees to help new plantings survive. Examples of ongoing Mālama Tree Crew sites include Ala Mahamoe in Moanalua, Akupu Enclosure in Palehua, and in the Pu'u Wa'awa'a State Forest Reserve on Hawai'i Island.

We commend the legislature for supporting an ambitious 4-year program under the Department of Land and Natural Resources to plant 1 million trees every year. This is an exciting project. Mass-scale tree planting will help to mitigate the effects of climate change in Hawai'i by sequestering carbon and maintaining proper watershed and ecosystem functions. In urban areas, increasing tree cover will improve air quality and keep our cities cooler.

We defer to the Department as to what is specifically needed to effectively implement and manage this project, but would suggest consideration and flexibility for project funding as follows:

- Allowing funding for facilities, staffing, and tools/equipment needs for the State Tree Nursery, which exists to provide high quality native, endangered and windbreak trees and plants for both the public and DLNR-state sponsored out-plantings and reforestation projects.

¹ <https://sierraclubhawaii.org/malama-tree-crew/>

- Allowing funding for staff and supplies to coordinate maintenance of the newly planted trees, as there will be a need to weed, water, fertilize, and mulch plantings to reduce mortality of young trees.

A recent study published in the journal Science identified suitable land around the world for tree planting and concluded that the planting of 1 trillion trees could capture up to 25% of global annual carbon emissions.² While reforestation is not enough to solve the climate crisis, it can be one of the single most effective and low-cost strategies.³ We support SB 2077 and funding for the facilitation of reforestation, carbon sequestration, and native plant restoration projects throughout the islands.

Thank you very much for this opportunity to provide testimony in **support of SB2077**.

Mahalo,



Jodi Malinoski, Policy Advocate

² <https://science.sciencemag.org/content/365/6448/76>

³

<https://www.theguardian.com/environment/2019/jul/04/planting-billions-trees-best-tackle-climate-crisis-scientists-canopy-emissions>

SB-2077-SD-2

Submitted on: 3/9/2020 4:48:30 PM

Testimony for WLH on 3/11/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Heather Simmons	Hawaii Forest Industry Association	Support	No

Comments:

The Hawaii Forest Industry Supports SB2077, which seeks to establish the Hawaii Tree Planting Program to be administered by the Board of Land and Natural Resources for the planting of at least one million appropriate, non-invasive trees in the State per year.

According to Dr. Camilo Mora, University of Hawaii Professor and leader of the Carbon Neutrality Project, "Today, the average American produces roughly 20 tons of carbon per year. Trees are the best technology we know of that removes the carbon from the atmosphere through the process of photosynthesis. They take the CO₂, put it in their bodies and it stays there for years."

The benefits of planting trees include:

1. Reducing Climate Change: Trees absorb CO₂ removing it from the air and storing it while releasing oxygen. Annually, an acre of trees absorbs the amount of carbon dioxide equal to driving your car 26,000 miles. Only one tree can produce enough oxygen for four people.

2. Purifying Air: Trees purify the air by absorbing pollutant gases such as nitrogen oxides, ozone, ammonia, sulfur dioxide. Trees also absorb odors and act as a filter as little particulates get trapped in leaves. A mature acre of trees can yearly provide oxygen for 18 people.

3. Cooling Down the Streets: In the city, trees can help to cool down the streets. Our temperatures are rising as tree coverage declines. Removing trees and replacing them with heat absorbing asphalt roads and buildings makes cities much warmer. Trees are cooling cities by up to 10 F by providing shade and releasing water.

4. Natural Air Conditioning: Strategically placed trees around a home or other building can save energy by significantly cutting air conditioning needs.

5. Saving Water: Trees also help to save water. Because of the shade they provide, water will evaporate slowly from low vegetation. Trees need about 15 water gallons a week to survive, and they release about 200-450 gallons of water per day.

6. Preventing Water Pollution: Storm water can be full of phosphorus pollutants and nitrogen. Without trees, storm water flows into oceans and waters without being filtered. Trees break the rainfall and allow water to enter the earth and seep into the soil. Therefore, they prevent storm water from polluting oceans.

7. Providing Shelters for Wildlife: Trees contribute to boosting biodiversity as they become a food source and natural habitat for wildlife.

8. Renewable Energy Source: If harvested and treated sustainably, trees can become a great renewable source of energy.

9. Reinforcing Soil: Trees reduce soil erosion, increase fertility and help soil obtain moisture. Fallen tree leaves reduce soil temperature and prevent soil from losing too much moisture. Decaying leaves that fall onto the ground turn into nutrients for tree growth and promote microorganism development.

10. Erosion Control: Rain and wind are two primary erosion forces that damage the bare soil. As they fall from heights, drops of rain gain power and momentum, which is strong enough to penetrate soil once they hit the ground. On the other hand, if the land is dried out, then wind can do significant damage. Trees break droplets of rain and weaken their strength while roots hold the soil together and protect it from effects of wind. Source: Greenpop.org

SB-2077-SD-2

Submitted on: 3/10/2020 11:20:23 AM

Testimony for WLH on 3/11/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Climate Protector	Climate Protectors Coalition	Support	No

Comments:

NOTICE OF HEARING

DATE: Wednesday, March 11, 2020

TIME: 9:00 A.M.

Conference Room 325

PLACE: State Capitol

415 South Beretania Street

Aloha Chair Yamane, Vice Chair Todd, and members of the Committee on Water, Land & Hawai'iian Affairs.

The Climate Protectors Coalition **strongly supports** SB2077 SD2!

We are a new group inspired by the Mauna Kea Protectors but focused on reversing the climate crisis. As a tropical island State, Hawaii is and will be among the first places harmed by the global climate crisis, with more intense storms, loss of protective coral reefs, rising sea levels, and species eradication. We must do all we can to reduce our carbon footprint and become at least carbon neutral as soon as possible.

Planting trees draws carbon down out of the atmosphere and sequesters it in plants. Planting trees is one of the best and most efficient things we can do here in Hawaii to mitigate the climate crisis that threatens our future way of life here.

Hawaiians before contact sustained a population comparable to today's, while maintaining a majority of the landscape as forest areas, retaining all of the ecosystem services that a forest provides for humans, animals and

the environment. This bill will help restore that balance while reducing harmful atmospheric carbon.

Please pass this bill. Mahalo!

SB-2077-SD-2

Submitted on: 3/9/2020 10:17:10 AM

Testimony for WLH on 3/11/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Regina Gregory	EcoTipping Points Project	Support	No

Comments:

Please plant food trees.

SB-2077-SD-2

Submitted on: 3/9/2020 9:30:27 AM

Testimony for WLH on 3/11/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Dwamato	Individual	Support	No

Comments:

SB-2077-SD-2

Submitted on: 3/9/2020 11:01:17 AM

Testimony for WLH on 3/11/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Douglas Perrine	Individual	Support	No

Comments:

SB-2077-SD-2

Submitted on: 3/9/2020 11:28:41 AM

Testimony for WLH on 3/11/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Kirsten Carlson	Individual	Support	No

Comments:

SB-2077-SD-2

Submitted on: 3/9/2020 12:16:46 PM

Testimony for WLH on 3/11/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Justin Salisbury	Individual	Support	No

Comments:

SB-2077-SD-2

Submitted on: 3/10/2020 8:29:22 AM

Testimony for WLH on 3/11/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
donald erway	Individual	Support	No

Comments:

SB-2077-SD-2

Submitted on: 3/10/2020 9:17:59 AM

Testimony for WLH on 3/11/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Lauray Walsh	Individual	Support	No

Comments:

Plant more trees!

So many benefits... no downside.

Thank you!

Lauray Walsh

SB-2077-SD-2

Submitted on: 3/10/2020 10:31:58 AM

Testimony for WLH on 3/11/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
bob ernst	Individual	Support	No

Comments:

TESTIMONY IN STRONG SUPPORT FROM BOB ERNST

This is really a no brainer. These Islands were well treed by Mother Nature, before humans destroyed her work.. Today, with all the carbon footprint, again us humans, the need for tree sequestering carbon these Islands need to become treed again.

Hawaii County has an AG rate program for trees so land owners can plant trees to meet the Ag rate requirements, invasive free, native and 60% canopy. Tree seedlings are very inexpensive and of course native should also be a requirement.

Please support this Bill and let's get started on carbon sequestering re-treed Islands.

Mahalo,

Bob Ernst

Private Forester

SB-2077-SD-2

Submitted on: 3/10/2020 11:36:24 AM

Testimony for WLH on 3/11/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Chris Gabriele	Individual	Support	No

Comments:

Dear Senators,

I strongly support the proposal to plant 1 million trees to counteract climate change and restore and diversify Hawaii's forests. Climate change is a severe threat to the state, nation, and planet. It will have many benefits including community cooperation and physical fitness opportunities for the public.

For many years I have planted native trees and shrubs on my property in Kohala on Hawaii Island (koaia, wiliwili, aali'i, akia, iliahi, ilima, and ohai to name a few) and strong believe that these species are just as beautiful as the typical ornamental landscape plants that are more commonly used. Slowly over the past 15 years, the awareness and availability of native trees has increased. To continue that trend, it would be great if this bill would include public education about the use of native trees in landscapes, and encourage tree planting by individuals and not just organized groups.

I thank Dr. Mora for beginning this work and proving the concept. Passing this bill would be a testament to using the knowledge and expertise from Hawaii's university system to benefit the environment on a statewide scale. I do wonder about the \$4 re-usable watering system; how it works and where the profits would go.

Mahalo for your consideration.

Chris

LATE

SB-2077-SD-2

Submitted on: 3/10/2020 4:24:51 PM

Testimony for WLH on 3/11/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Julie Lawrence	Individual	Support	No

Comments:

Reforestation is vital to not only our island climate, life style and future, but to our place in the overall management of the world climate as well. We must lead by example and do our part.

SB-2077-SD-2

Submitted on: 3/11/2020 7:43:22 AM

Testimony for WLH on 3/11/2020 9:00:00 AM



Submitted By	Organization	Testifier Position	Present at Hearing
David Smith	Individual	Support	No

Comments:

A tree planting program should be established within the State Division of Forestry and Wildlife to increase the current rate of approximately 150,000 trees planted and cared for each year to one million trees per year. The cost/benefit is strongly in favor of tree planting.