

SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM

The Honorable Glenn Wakai, Chair
The Honorable Brian T. Taniguchi, Vice Chair

SENATE COMMITTEE ON WATER AND LAND

The Honorable Kaiali'i Kahele, Chair
The Honorable Gilbert S.C. Keith-Agaran, Vice Chair

H.B. NO. 1558, H.D. 1, RELATING TO SUSTAINABILITY

Hearing: Wednesday, March 13, 2019, 1:15 p.m.

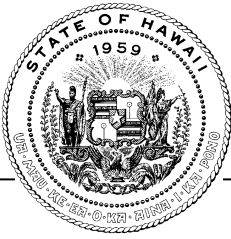
The Office of the Auditor **supports** H.B. No. 1558, H.D. 1, which requires the Office of Planning, rather than our office, to update the Hawai'i 2050 sustainability plan and submit the updated plan to the Legislature prior to the Regular Session of 2021 and every tenth session thereafter. We have been in discussion with the Office of Planning and appreciate its recommendation that responsibility for the report be transferred to their office.

Act 8 of the 2005 Special Session of the Hawai'i State Legislature established the Hawai'i 2050 Task Force to review the Hawai'i State Plan and the State's comprehensive planning system, to develop a statewide sustainability plan for the 21st century. It also required the Office of the Auditor, with the assistance of the office of planning "[to] update the [sustainability] plan every ten years and report to the legislature." However, the Legislature did not appropriate any funding beyond fiscal year 2007 for purposes of the Act.

Because our office lacks the requisite expertise and financial resources to facilitate a full, formal update, we issued an informal update of the Hawai'i 2050 Sustainability plan prepared by the Office of Planning.

The Office of Planning is the more appropriate office to be tasked with updating the plan given their substantive knowledge of state policies, strategies, and priorities with respect to sustainability and the impacts of climate change.

Thank you for considering our testimony related to H.B. No. 1558, H.D. 1.



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Statement of
LEO R. ASUNCION
Planning Program Administrator, Office of Planning
before the
**SENATE COMMITTEES ON ENERGY, ECONOMIC DEVELOPMENT, AND
TOURISM**

Wednesday, March 13, 2019
1:15 PM

State Capitol, Conference Room 229

in consideration of
HB 1558, HD1
RELATING TO SUSTAINABILITY.

Chairs Wakai and Kahele, Vice Chairs Taniguchi and Keith-Agaran, and Members of the Senate Committees on Energy, Economic Development, and Tourism, and Water and Land.

The Office of Planning supports HB 1558, HD1, provided that its passage does not replace or adversely impact the priorities indicated in the Executive Budget. HB 1558, HD1 requires the Office of Planning to update the Hawaii 2050 Sustainability Plan and submit the updated plan to the Legislature prior to the Regular Session of 2021, and every tenth session thereafter, using the goals and priority guidelines of the Hawaii State Plan and the Hawaii Climate Change Mitigation and Adaptation Initiative as guiding principles.

The 2005 State Legislature established the Hawaii 2050 Sustainability Task Force through Act 8, Special Session Laws of Hawaii 2005, which worked with the State Auditor to publish the Hawaii 2050 Sustainability Plan in 2008. Act 8, Special Session Laws of 2005, as amended by Act 210 Session Laws of Hawaii 2006, required the State Auditor, with the assistance of the Office of Planning to perform an unfunded decennial update of the Hawaii 2050 Sustainability Plan in perpetuity.

The 2016 State Legislature later established the State's Sustainability Coordinator position within the Office of Planning through the Supplemental Appropriations Act of 2016, this position was filled in June 2017. The Sustainability Coordinator was notified that the decennial update requirement of the 2008 Hawaii 2050 Sustainability Plan was approaching within the year and assisted the Hawaii State Auditor's Office on behalf of the Office of Planning to provide and publish an unfunded statewide measurement update to the Hawaii 2050 Sustainability Plan. Published in March 2018, the ten year measurement update of the Hawaii 2050 Sustainability Plan, the first of its kind over the past decade, reviewed the data collected from agencies statewide over the course of ten years spanning from 2008-2017 and evaluated the metrics and indicators measuring Hawaii's progress toward sustainability according to the

Hawaii 2050 Sustainability Plan’s original 5 goals, 9 “2020 benchmarks,” 22 strategic actions, and 55 indicators.

The Office of Planning appreciates HB 1558, HD1’s proposal to codify the Hawaii 2050 Sustainability Plan and update requirements within Hawaii Revised Statutes Chapter 226, the Hawaii State Planning Act, for conformity and comprehensive sustainability and climate action planning purposes. The Office of Planning finds that HB 1558, HD1 is complimentary and consistent with the purpose of the Office of Planning found in HRS § 225M-1, as well as the responsibilities of the Office of Planning set forth in HRS §225M-2. HB 1558, HD1 establishes a stronger policy framework to focus on the planning, coordination, and collaborative implementation of Hawaii’s long-term sustainability, by incorporating long-term sustainability coordination and climate action planning into the duties and responsibilities of the Office of Planning.

Thank you for the opportunity to testify on this measure.

HB-1558-HD-1

Submitted on: 3/12/2019 8:49:11 AM

Testimony for EET on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Brian Miyamoto	Testifying for Hawaii Farm Bureau	Support	Yes

Comments:



March 13, 2019

To: Chair Kaiali'i Kahlele
Vice Chair Gilbert S. C. Keith Agaran
Senate Committee on Water and Land

Chair Glen Wakai
Vice Chair Brian T. Taniguchi
Senate Committee on Energy, Economic Development, and Tourism

Re: **Testimony in Support of HB 1558, HD1**

Hrg: March 13, 2019 at 1:15pm, Conference Room 229, State Capitol

The Hawaii Public Health Association is a group of over 600 community members, public health professionals and organizations statewide dedicated to improving public health. HPHA also serves as a voice for public health professionals and as a repository for information about public health in the Pacific.

The Hawai'i Public Health Association (HPHA) **supports HD 1558, HD1**, which requires the Office of Planning to update the Hawai'i 2050 sustainability plan and submit the updated plan to the Legislature prior to the Regular Session of 2021 and every tenth session thereafter. Climate change presents a public health problem, with serious health impacts including; increased respiratory and cardiovascular disease, injuries and premature deaths related to extreme weather events and changes in food distribution and infectious diseases. Key weather and climate drivers of health impacts include increasingly frequent extreme precipitation, intense storms, and changes in precipitation patterns that lead to ecosystem changes and rising sea levels that intensify coastal flooding and storm surge.

It is imperative that the Hawai'i 2050 sustainability plan be updated regularly using the goals and priority guidelines of the state plan and the Hawai'i climate change mitigation and adaptation initiative as guiding principles. This will help to ensure a collective and coherent response to the multifaceted problem presented by climate change.

Thank you for the opportunity to provide testimony on important health issues affecting people in Hawai'i.

Respectfully submitted,

Claire Townsend Ing

Claire Townsend Ing, DrPH
Legislative Committee Chair

HB-1558-HD-1

Submitted on: 3/11/2019 9:23:02 PM

Testimony for EET on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Scott Foster	Testifying for Hawaii Advocates For Consumer Rights	Support	No

Comments:

Aloha,

HB 1558 HD1 requires the Office of Planning to update the Hawaii 2050 sustainability plan using the goals and priority guidelines of the Hawaii State Plan and Hawaii Climate Change mitigation and Adaptation Initiative as guiding principles. This important bill requires the Office of Planning to update the Hawaii 2050 sustainability plan and submit the updated plan to the Legislature prior to the Regular Session of 2021 and every tenth session thereafter, using the goals and priority guidelines of the state plan and the Hawaii climate change mitigation and adaptation initiative as guiding principles. (HB1558 HD1).

Mahalo for supporting this excellent and wise legislation.

Scott Foster
Communications Director
Hawaii Advocates For Consumer Rights
808-590-5880



Email: communications@ulupono.com

SENATE COMMITTEES ON WATER & LAND AND ENERGY, ECONOMIC DEVELOPMENT, &
TOURISM

Wednesday, March 13, 2019 — 1:15 p.m. — Room 229

Ulupono Initiative Supports HB 1558 HD 1, Relating to Sustainability

Dear Chair Kahele, Vice Chair Keith-Agaran, Chair Wakai, Vice Chair Taniguchi, and
Members of the Committees:

My name is Murray Clay and I am Managing Partner of Ulupono Initiative, a Hawai'i-based impact investment firm that strives to improve the quality of life for the people of Hawai'i by working toward solutions that create more locally produced food; increase affordable, clean, renewable energy; and better manage waste and fresh water resources. Ulupono believes that self-sufficiency is essential to our future prosperity and will help shape a future where economic progress and mission-focused impact can work hand in hand.

Ulupono supports HB 1558 HD 1, which requires the Office of Planning to update the Hawai'i 2050 sustainability plan in 2021 and every tenth session thereafter.

The Hawai'i 2050 sustainability plan, completed in January 2008, was a forward-looking document that tried to align interests around these issues. While much has changed in the past 11 years, our ability to collaborate toward solutions is still a vital component for success. Without a common framework and plan, it is often difficult to align interests amongst the various stakeholders to get things done. Sustainability and resiliency issues have become even more top of mind, and the consequences of inaction have become more apparent. It is time to update the 2050 plan to reflect the progress we have made since 2008 and to update new challenges standing in the way of a more resilient future.

As Hawai'i's issues become increasingly complex and challenging, we appreciate these committees' efforts to look at policies that improve the quality of life for the people of Hawai'i. Thank you for this opportunity to testify.

Respectfully,

Murray Clay
Managing Partner

Investing in a Sustainable Hawai'i

HB-1558-HD-1

Submitted on: 3/9/2019 11:39:49 AM

Testimony for EET on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Javier Mendez-Alvarez	Individual	Support	No

Comments:

HB-1558-HD-1

Submitted on: 3/11/2019 11:10:09 AM

Testimony for EET on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Philip Fernandez	Individual	Support	No

Comments:

I am a resident of Kona, Big Island. I support the Hawaii 2050 Sustainability Plan.

HB-1558-HD-1

Submitted on: 3/12/2019 7:44:37 PM

Testimony for EET on 3/13/2019 1:15:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Andrea Quinn	Individual	Support	No

Comments:

Dear Honorable Committee Members:

Please support HB1588. Hawaii's valuable coastlines are eroding and our coral reefs are dying due to climate change, which is already occurring. We need to be a leader in enacting a green infrastructure.

Thank you for the opportunity to present my testimony.

Sincerely,

Andrea Quinn

Kihei



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FOUNDERS

David Gottfried
Michael Italiano
S. Richard Fedrizzi

LATE

March 13, 2019

Committee on Water and Land

Senator Kaiali'i Kahele, Chair
Senator Gilbert S.C. Keith-Agaran, Vice
Chair

Hawai'i State Capitol, Room 213
Honolulu, HI 96813

Committee on Energy, Economic
Development, and Tourism

Senator Glenn Wakai, Chair
Senator Brian T. Taniguchi, Vice Chair

Hawai'i State Capitol, Room 407
Honolulu, HI 96813

RE: HB 588, on Green Infrastructure and HB 1558, Hawai'i 2050 Sustainability Plan Update

Dear Chair Kahele, Vice Chair Keith Agaran, Chair Wakai, and Vice Chair Taniguchi,

On behalf of the U.S. Green Building Council (USGBC), our nearly 9,000 member companies nationwide, and our strong community in Hawaii, we appreciate the opportunity to provide this letter of support for Senate Bill 588 (SB 588), on green infrastructure and Senate Bill 1558 (SB 1558), the Hawai'i 2050 Sustainability Plan Update.

USGBC and LEED in Hawai'i

USGBC is a nonprofit organization committed to transforming the way all buildings and communities are designed, built, and operated to support a more sustainable, resilient, and prosperous environment that improves the quality of life for all.

Our flagship green building rating system, LEED, continues to grow in the Hawai'i market, with over 200 certified projects amounting to more than 19 million square feet in total.¹ Our education and professional credential programs support green building in Hawai'i as well, with more than 1,300 Hawai'ians holding a LEED Accredited Professional (AP) or a LEED Green Associate credential.

LEED and Climate Resilience

USGBC is committed to building and design practices that are sustainable, efficient, and economically sound. Resilience is a clear extension of this work, and LEED works to encourage and support resilience outcomes in the built environment. For projects to earn LEED certification, they must meet high standards for sustainability and efficiency, thus positioning them to maximize their overall resilience as well. In order to moderate the intensifying effects of climate change on our communities and infrastructure, LEED

¹ [State Market Briefs](#), U.S. Green Building Council.



is a critical tool that has been proven effective with industry stakeholders, including building owners and occupants.

USGBC works to ensure project teams are supported in their resilience efforts, including providing guidance to facilitate identification of opportunities to improve the durability and sustainability of projects pursuing LEED.² Also, LEED helps guide project teams in reducing their greenhouse gas emissions and carbon footprints associated with their building projects. According to a recent study, buildings certified under LEED Operations and Maintenance (LEED O+M) were associated with lower levels of greenhouse gases (GHGs). Specifically, LEED buildings were associated with 50 percent fewer GHGs from water use, 48 percent fewer GHGs from solid waste input, and five percent fewer GHGs from transportation.³ LEED gives project teams the tools they need to effectively mitigate the effects of climate change, as well as save resources, and protect the well-being of occupants and surrounding communities.

Like LEED, SITES is designed to help communities mitigate and adapt to the effects of climate change, though specifically developed to support sustainable land development. With input from landscape architects, designers, planners, ecologists, and engineers, resilience is one of the key goals of the SITES system. Credits include focus on green infrastructure, sustainable construction and maintenance, low carbon output, and more. SITES is more than just a system for individual landscape projects – SITES guides projects to enhance their resilience, thus ensuring readiness for a rapidly changing climate.⁴

USGBC Supports HB 588 and HB 1558

USGBC offers our strong support of both HB 588 and HB 1558, legislation that is before the committees today. HB 588 would mandate a comprehensive state-wide study on opportunities for green infrastructure in Hawai'i, and HB 1558 would require an update to the Hawai'i 2050 sustainability plan, and ensure that climate change mitigation and adaptation priorities are incorporated in any updates. Each of these proposals will support Hawai'i in its continued progress in enhancing resilience of its built environment and mitigating the effects of climate change.

USGBC commends the state of Hawai'i for its leadership on these critical issues. We thank the Committee and Water and Land and the Committee on Energy, Economic Development, and Tourism for bringing these bills up for consideration today. USGBC urges the members of each committee to support HB 588 and HB 1558, and move towards their swift passage.

² ["Profiles of Resilience: LEED in Practice,"](#) USGBC Resources.

³ ["Quantifying the Comprehensive Greenhouse Gas Co-Benefits of Green Buildings,"](#) Center for the Built Environment, University of California-Berkeley (2014).

⁴ ["Greenspace for Good: Using the SITES System to Advance Resilience,"](#) USGBC Resources.



Thank you for your consideration of our remarks. Please contact us if we can be of any assistance or have any questions.

Sincerely,

A handwritten signature in black ink, which appears to read "Elizabeth Beardsley". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Elizabeth Beardsley, P.E.
Senior Policy Council
U.S. Green Building Council

From: [Ian Tierney](#)
To: [WTL Testimony](#)
Subject: Support for HB 1558 HD 1, relating to Hawaii 2050 Sustainability Plan Update
Date: Tuesday, March 12, 2019 8:52:44 AM

Aloha Chair Kahele, Vice Chair Keith-Agaran, Chair Wakai, Vice Chair Taniguchi, and members of the Committees,

I am testifying in support of House Bill 1558 HD 1.

This is an important bill that addresses planning and coordinating for the future of Hawaii.

I support this bill because it:

- Establishes a stronger legal framework to focus on the planning, coordination, and collaborative implementation of Hawaii's long-term sustainability to serve as a foundation for the State of Hawaii's sustainability policies; and
- Supports comprehensive statewide sustainability coordination with recognized responsibilities and authorities to update, coordinate, and support the implementation of Hawaii's sustainability goals, priorities, and planning throughout government.

In addition to being a resident of Honolulu, I volunteer on the board of the US Green Building Council Hawaii Chapter, which is dedicated to best practices in the built environment. On behalf of our 100+ local members, I support this bill.

Thank you for considering my testimony.

Ian Tierney
Honolulu, HI 96816

LATE

I attach two items one is the testimony I delivered at the Manoa Board meeting earlier this year

in regards to the engineering work that will inevitably scar the Manoa landscape and destroy the roads during construction. It is the way with engineering.

The Manoa market place does not have permeable paving it is 5.8 acres of rain catchment that partly helps to fill up the Alawai, we are spending \$350Million preparing for the 100 year flood.

For 10 years I have been advocating permeable paving for areas of Oahu that are built in natural rain forest areas

Please also find a link to some brilliant research done by a farmer on what This is an amazing solution to reverse climate change with a standing ovation

A M A Z I N G

<https://www.youtube.com/watch?v=vpTHi7O66pI>

happens when you rehydrate land in Australia the same principles apply to the land anywhere.

I would appreciate some serious planning along the lines the video shows.

--

Michael Krijnen

Architect

Building Plan Examiner ICC

Questions for tonight. Have you answers what are the options where are your examples where is your model?

“Surface runoff produces some of the worst environmental problems in Hawai'i and elsewhere, including soil erosion and flash flooding. As noted earlier, surface runoff is determined by the properties of the surface itself. If it is compacted, saturated with water, or has an impermeable coating, like concrete, runoff will be high. If it is highly porous, like bare lava rock or loose soil, runoff will be low or non-existent.” 1990 Report.

An example of poor planning is the recent repaving of Manoa Shopping Center, with the same old same old oil based asphalt. The whole of the parking lot could be a catch basin or could have been paved with a porous asphalt or concrete, that is what you should do in a rain forest area.



The whole shopping Center could be “green” if it dealt with the water hitting the roofs and parking lot, 5.8 acres, was dealt with on site, by making a sump on site to make an injection well that water would be filtered and used to recharge the fresh water lens.

Porous Asphalt - National Asphalt Pavement Association

www.asphaltpavement.org/index.php?option=com_content&view=article...

Porous asphalt pavements offer developers and planners a new tool in their toolbox for managing storm water. These pavements, used mostly for parking lots , ...



- How much would it cost to replace secondary, existing roads with porous surfaces to give you the area needed to absorb this extra water in the 100 year flood?
- From the 1990's report what unpaved land area from the homes of the 65,000 residents could be made available for small on site percolation, driveways, catch basins, foot paths etc for the rain water that is now directed into the streams?
- What was the basis for the study used to come up with the plan?

The only information on line is a study from thirty years ago, 1990. From that report Manoa stream and Palolo stream have water gage (gauge) monitors Makiki stream does not, the Alawai Canal* capacity is the sum of those which we do not know! We have from that report the statement that channelization is not a good thing because it does not let the water drain through the stream bed. We do not know the amount of non draining stream bed, is in these three water courses.

- Overall 70% of streambeds have been channelized on Oahu, is this a figure that we know, for the specific project design?
- Has the Corps done any innovative thinking to come up with a solution to this “dry” (non water absorbing) stream bed?
- In your figures for the design you have what is the area and the percolation rate in the retention basins required to deal with the flood waters?
- Is there a drainage plan that we have that tells us where the water is currently being directed?
- It appears that there is no effort to have hydropower installed in the scheme. Would there be a study on that in the \$345Million project that could offset the expense of the project?
- Have you any computer modeling that the public can see? Where in the USA or in the world is there a similar project? Or is this a dakine original.

*Stream 3-3-07 Table 7

Can we innovate our way out of danger?

Storm surge and runoff: Capture, store and release

Natural protective features: reefs, wetlands, oyster beds...

Dual use landscapes

e.g. from Rebuild by Design (<http://www.rebuildbydesign.org/>)

"Rebuild is part of a large team funded by a National Science Foundation Critical Resilient Interdependent Infrastructure Systems and Processes (CRISP 2.0) grant to "Enhance the Resilience of Island Communities" focused on western Puerto Rico. This three year grant will enable the team from NYU, CUNY, ASU, UPR, Brookhaven Laboratories and others to understand impact of the interdependencies of critical infrastructure systems when exposed to weather extremes, and how those interdependencies cause failures of physical assets leading to adverse impacts on the health and socio-economic wellbeing of the communities in those regions. The work kicked off in January 2019."

<https://www.resilienceshift.org/> sponsored by Lloyd's Register Foundation

Here in HI: Indigenous Science – Western Science

Use modeling, simulation, and advanced visualization to develop design innovations against threats posed from both storm surge and tsunamis.

Use these same tools to produce effective preparation and training systems