

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

SYLVIA LUKE  
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
KA 'OIHANA KUMUWAIWAI 'ĀINA  
P.O. BOX 621  
HONOLULU, HAWAII 96809

DAWN N.S. CHANG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE  
MANAGEMENT  
RYAN K.P. KANAKA'OLE  
FIRST DEPUTY  
CIARA W.K. KAHAHANE  
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  
RYAN K.P. KANAKA'OLE  
Acting Chairperson**

**Before the Senate Committees on  
ECONOMIC DEVELOPMENT AND TOURISM  
and  
ENERGY AND INTERGOVERNMENTAL AFFAIRS**

**Thursday, February 12, 2026  
1:00 PM  
State Capitol, Conference Room 229**

**In consideration of  
SENATE BILL 2278  
RELATING TO LIGHT POLLUTION**

Senate Bill 2278 requires all outdoor light fixtures to be fully shielded, creates exemptions for certain outdoor lighting, repeals the Night Sky Protection Strategy, and appropriates funds. **The Department of Land and Natural Resources (Department) offers comments on this measure.**

The Department recognizes the importance of protecting the dark sky for both the people and wildlife of Hawai'i. Artificial light at night negatively impacts wildlife, including seabirds and sea turtles, and hampers astronomical observation, stargazing, and related cultural practices.

To ensure clarity and consistency, the Department recommends using standardized terminology from the American National Standards Institute (ANSI) and the Illuminating Engineering Society (IES). Specifically, upright classifications (e.g., U0) should be used to define fully shielded lighting requirements in accordance with ANSI/IES TM-15-20.

The Department recommends amending lines 7 to 11, page 1, as follows:

Beginning July 1, 2026, every new and replacement outdoor lighting fixture installed in the State shall be required to be fully shielded and to have a correlated color temperature of [~~four~~] three thousand Kelvin or less;

The Department recommends reducing this threshold to 3,000 Kelvin or less, which provides adequate illumination while substantially reducing short-wavelength emissions and associated skyglow.

The Department recommends amending lines 15 to 16, page 3, as follows:

(2) Installed and maintained with ~~[minimum]~~ maximum aiming angles of twenty-five degrees downward from the horizontal;

The Department understands the intent to establish the maximum allowable vertical angle of emitted light to minimize uplight. Accordingly, the word “minimum” should be replaced with “maximum” to reflect this intent.

The Department recommends amending lines 3 to 7, page 4, as follows:

~~[Where fully shielded outdoor lighting fixtures are not used, acceptable luminaires shall be partially shielded lights that emit no more than five per cent of their light above the horizontal plane, as certified by an independent testing agency.]~~

The Department recommends removing this provision to maintain consistency with dark sky objectives and require fully shielded (U0-rated) fixtures only.

The Department strongly supports efforts to reduce light pollution and protect dark skies throughout the State as outlined in this measure.

Mahalo for the opportunity to comment on this measure.



STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
KA 'OIHANA HO'ONA'AUAO  
P.O. BOX 2360  
HONOLULU, HAWAII 96804

**Date:** 02/12/2026

**Time:** 01:00 PM

**Location:** CR 229 & Videoconference

**Committee:** EDT/EIG

**Department:** Education

**Person Testifying:** Keith T. Hayashi, Superintendent of Education

**Title of Bill:** SB2278, RELATING TO LIGHT POLLUTION.

**Purpose of Bill:** Requires all outdoor light fixtures to be fully shielded. Creates exemptions for certain outdoor lighting. Repeals the Night Sky Protection Strategy. Appropriates funds.

**Department's Position:**

The Hawaii State Department of Education (Department) appreciates the opportunity to offer testimony with comments on SB 2278.

The Department fully supports the intent of SB 2278 to protect Hawaii's natural habitat, which includes seabirds, sea turtles, pollinators, bats, and coral reefs, and to respect and maintain native Hawaiian cultural practices and traditions. As stewards of 258 public school campuses facilities across the state, many of which are located near the state's most pristine coastline or in hilly terrain, the Department recognizes that its outdoor lighting can inadvertently cause unintended impacts on native wildlife and the environment.

The Department offers the following comments to ensure that the transition to safer lighting is sustainable, safer for our students, and financially responsible, while still supporting the intent of this bill:

- The Department supports the requirement for downward-facing, shielded fixtures and the use of warm-colored LED lights. While reducing light pollution is crucial, school campuses must remain safe and secure for evening educational activities, and custodial services. The Department would support the use of motion sensors, which allow lights to remain off or dimmed during late-night hours, but provide directional, full illumination when necessary for safety.
- The Department requests that the implementation timeline for its compliance with this bill be tied to allow for the replacement of fixtures upon natural breakage, and for or during scheduled infrastructure upgrades.
- The Department requests an exemption for specific emergency or security lighting on its campuses to protect school property, similar to those outlined in the bill for airports, highways, and harbors as school campuses are many times used as civil defense shelters in times of natural disasters and emergencies.

The Department is committed to acting as a responsible environmental partner to protect Hawaii's unique biodiversity. With reasonable timeframes to convert existing infrastructure, the Department believes this bill can protect Hawaii's natural habitat while maintaining safe, well-lit environments for our students and staff.

Thank you for this opportunity to provide testimony with comments on SB 2278.



# UNIVERSITY OF HAWAII SYSTEM

## ‘ŌNAEHANA KULANUI O HAWAII

### Legislative Testimony

#### Hō'ike Mana'o I Mua O Ka 'Aha'ōlelo

Testimony Presented Before the  
Senate Committee on Economic Development and Tourism  
and  
Senate Committee on Energy and Intergovernmental Affairs  
Thursday, February 12, 2026 at 1:00 p.m.

By

Doung Simons, Director  
Institute for Astronomy

and

Vassilis L. Syrmos, PhD  
Interim Provost

University of Hawai'i at Mānoa

#### SB 2278 – RELATING TO LIGHT POLLUTION

Chairs DeCoite and Wakai, Vice Chair Chang, and Members of the Committees:

The University of Hawai'i (UH) **offers comments on SB 2278**, relating to outdoor lighting and light pollution. SB 2278 in its current form conflicts with the scientific findings and statewide recommendations of the Dark Skies Protection Advisory Committee (Act 185, 2017) and could be detrimental to wildlife protection, public health, cultural practices, and astronomical research.

The Dark Skies Protection Advisory Report emphasizes that light pollution is a statewide ecological, cultural, and scientific threat, noting that “light pollution...disorients wildlife, diminishes the visibility of the stars, and disturbs sleep.” SB 2278 does not incorporate the report's core technical standards and, in several areas, reverses progress.

Specific concerns with this legislation in its current form include -

- The Report recommends a maximum CCT of 3000K statewide, with 1800–2200K preferred to protect wildlife and astronomy. SB2278 instead allows 4000K CCT lighting, which the Report identifies as harmful to seabirds, turtles, insects, coral, and human circadian health.
- The Report specifies that fixtures must have a maximum uplight rating of U1, and U0 in wildlife-sensitive areas. SB 2278 does not include BUG-rating requirements, allowing fixtures that increase skyglow and violate best practices.
- Artificial lighting disorients hatchling turtles and contributes to seabird fallout events. SB2278's broad exemptions—especially for athletic facilities and roadway lighting—would allow continued high-intensity, blue-rich lighting in the areas where fallout and disorientation often occur.

- The Report calls for adoption of IES/ANSI RP-43 lighting zones statewide. SB 2278 does not establish zones, curfews, or adequate lumen limits, leaving counties without the tools needed to protect sensitive habitats.
- The Report recommends strengthening, not repealing, statewide lighting law. SB 2278 removes the existing framework but does not replace it with the scientifically supported standards in the Report.

UH respectfully suggests amendments to better align SB 2278 with the Dark Skies Protection Advisory Committee's findings. At minimum, amendments should include -

- CCT  $\leq$  3000K statewide; 1800–2200K preferred
- U1 statewide / U0 in wildlife zones
- Lighting zones, lumen limits, curfews, and adaptive controls
- Turtle-safe DE-Amber requirements in coastal areas

Mahalo for the opportunity to testify.



**TESTIMONY OF TINA YAMAKI, MANAGING DIRECTOR  
HAWAII TRANSPORTATION ASSOCIATION  
FEBRUARY 12, 2026  
SB 2278 RELATING TO LIGHT POLLUTION.**

Aloha Chair DeCoite and Chair Wakai and members of the Senate Committee on Economic Development & Tourism and the Senate Committee on Energy and Intergovernmental Affairs. I am Tina Yamaki, Managing Director of the Hawaii Transportation Association and I appreciate this opportunity to testify.

The Hawaii Transportation Association (HTA) was founded in 1938 and incorporated in 1963, and is a private, non-profit trade organization dedicated to the service and assistance to the commercial ground transportation industry in the State of Hawaii. Our members include family owned small and medium sized businesses, independent owner operators, and national motor carriers range from delivery services to passenger carriers - as well as allied industry partners.

We understand the rationalization of this measure that requires all outdoor light fixtures to be fully shielded; creates exemptions for certain outdoor lighting; repeals the Night Sky Protection Strategy; and appropriates funds.

While we are in support of our environment and native wildlife, we do not support SB 2278 as we have concerns regarding this measure.

There has to be a balance between the safety of the environment and our businesses. Many of our members are ports and freight yards, warehouses and logistics. We depend on good lighting to be in compliance with OSHA rules and regulations, to operate at night as well as to deter theft and other illegal activities. These retrofits will conflict with workplace safety and productivity.

We also have concern as to how this will be enforced as it is our understanding that some expertise is needed to measure things like lumens, kelvin ratings and shielding angles.

To change our or to retrofit outdoor light fixtures will place a financial burden on many of our small mom & pop businesses, that are our members. Full cut-off shielding, spectrum LEDs, lower Kelvin ratings ( $\leq 2200-2700K$ ) often mean full fixture replacement, not just changing a bulb. This would also include hundreds of pole mounted luminaires, yard and perimeter security lighting at warehouses and logistic yards. Should these businesses compensate by installing more fixtures at lower intensity, this would offset any expected energy savings and increase capital outlay.

The cost will most likely be passed on to the our customers – wholesalers, retailers... who will eventually pass that cost to the consumer who will now be paying more for their groceries, building supplies, clothing and other goods.

Mahalo for this opportunity to comment.



**BOARD OF DIRECTORS**

Diane Harding  
President

Maureen Murphy  
Vice President

Denise Soderholm  
Treasurer

Whitney Bosel  
Secretary

Cheryl Langton  
Branch Representative

Beverley Brand  
Advisor

Joan Gossett  
Advisor

Jonathan Sudler  
Advisor

**Directors:**

Tyler Dang

Brenda Lam

Jack O'Neill

**BRANCHES**

**Hawai'i**

East Hawai'i

Kona

Waikoloa Village

Waimea

**Kaua'i**

**O'ahu**

East Honolulu

Lani-Kailua

Mānoa

North Shore

Greater Waikiki

**STAFF**

Winston Welch  
Executive Director

Jacqueline Wah  
Operations Director

Myles Ritchie, PhD  
Programs Director

Keeping Hawai'i clean,  
green and beautiful  
since 1912

February 10, 2026

**RE: TESTIMONY IN STRONG SUPPORT OF SB2278--Relating to Light Pollution**

Dear Chair, Vice Chair, and Members of the Committee:

The Outdoor Circle is in strong support of SB2278, Relating to Light Pollution.

For more than a century, The Outdoor Circle's adopted public policies have supported efforts and legislation to protect and enhance the natural environment and quality of life for Hawai'i residents — including minimizing the spread of nighttime lighting from adjacent buildings and other sources.

Poorly designed outdoor lighting — unshielded fixtures, excessive brightness, and uncontrolled light spill — produces glare, wastes energy, disrupts sensitive wildlife behavior, and degrades the nighttime environment without improving safety. The problems and solutions here are well-documented: directing light only where it is needed, shielding fixtures, and limiting unnecessary illumination are standard practices used elsewhere to improve outcomes.

As coastal development and nighttime illumination continue to expand across the islands, the absence of consistent lighting standards risks accelerating these impacts.

SB2278 reflects these recognized practices. It establishes clear, performance-based lighting standards that reduce glare and light spill statewide, while allowing reasonable exemptions for emergency and limited-use fixtures. This approach improves predictability for property owners and public agencies while addressing the real harms associated with light pollution.

While light pollution is an issue in many places, its effects are especially significant in Hawai'i. Our islands' unique ecosystems — including native seabirds, sea turtles, and other wildlife — rely on natural darkness for navigation and reproductive behavior. Uncontrolled artificial lighting interferes with these fundamental processes.

Dark skies are also part of Hawai'i's scenic heritage and sense of place — a shared public resource valued by residents and visitors alike.

In addition, lighting that spills into neighborhoods and public spaces affects quality of life. As part of TOC's policy positions, we support measures that enhance livability by minimizing adverse visual and environmental impacts, including from excessive nighttime lighting.

1314 S. King Street #306 | Honolulu, Hawai'i 96814

T: 808-593-0300 | mail@outdoorcircle.org | www.outdoorcircle.org

SB2278 advances uniform statewide standards, avoids a patchwork of inconsistent local rules, and aligns Hawai'i with contemporary best-practice, evidence-based lighting standards that deliver measurable benefits without unnecessary burdens.

For these reasons — consistent with The Outdoor Circle's longstanding mission to keep Hawai'i clean, green, and beautiful while enhancing environmental quality and livability — **we strongly support SB2278.**

Thank you for your service and for your consideration of my testimony.

Respectfully,

A handwritten signature in black ink, appearing to read 'W. Welch', with a long, sweeping horizontal stroke extending to the right.

Winston Welch  
Executive Director  
The Outdoor Circle

**SB-2278**

Submitted on: 2/10/2026 6:20:04 PM

Testimony for EDT on 2/12/2026 1:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Johnnie-Mae L. Perry	Individual	Support	Written Testimony Only

Comments:

I, Johnnie-Mae L. Perry Support

2278 SB RELATING TO LIGHT POLLUTION.

**SB-2278**

Submitted on: 2/11/2026 10:08:21 AM

Testimony for EDT on 2/12/2026 1:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Andy Kagemoto	Individual	Support	Written Testimony Only

Comments:

In support-thank you!