

SB 2402, SD1

RELATING TO LIGHT POLLUTION

Description:

Requires every new and replacement outdoor light fixture to be fully shielded beginning 7/1/13, with certain exemptions. (SD1)

NEIL ABERCROMBIE
GOVERNOR



DEAN H. SEKI
Acting Comptroller

JAN S. GOUVEIA
Deputy Comptroller

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING
AND GENERAL SERVICES
P.O. BOX 119
HONOLULU, HAWAII 96810-0119

WRITTEN TESTIMONY
OF
DEAN H. SEKI, ACTING COMPTROLLER
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
TO THE
SENATE COMMITTEE
ON
PUBLIC SAFETY, GOVERNMENT OPERATIONS, AND MILITARY AFFAIRS
ON
February 21, 2012
S.B. 2402, S.D. 1

RELATING TO LIGHT POLLUTION

Chair Espero and members of the Committee, thank you for the opportunity to testify on S.B. 2402, S.D. 1.

The Department of Accounting and General Services supports S.B. 2402, S.D. 1 and defers to the Department of Land and Natural Resources Historic Preservation Division regarding the exemption for the refurbishment, repair, or replacement-in-kind of lighting fixtures that are character-defining features of a historic property, as reflected in the current bill draft.

Thank you for the opportunity to testify on this matter.

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



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

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

**Testimony of
WILLIAM J. AILA, JR.
Chairperson**

**Before the Senate Committee on
PUBLIC SAFETY, GOVERNMENT OPERATIONS, AND MILITARY AFFAIRS**

**Tuesday, February 21, 2012
2:45 PM
State Capitol, Conference Room 224**

**In consideration of
SENATE BILL 2402, SENATE DRAFT 1
RELATING TO LIGHT POLLUTION**

Senate Bill 2402, Senate Draft 1 proposes to require that certain light sources be modified or replaced with fixtures that will limit and reduce sources of light pollution. The measure provides exemptions for public safety, lights that are temporary in nature, fixtures that emit less than 3,000 lumens, and any lights installed prior to July 1, 2013 and the Senate Draft 1 added a new exemption for historic properties. The measure would apply only to state agencies. The Department of Land and Natural Resources (Department) supports Senate Bill 2402, Senate Draft 1 as a welcomed first step in reducing sources of light pollution.

Light pollution in Hawaii impacts wildlife and increases consumption of fossil fuels that contribute to climate change. Lighting can disrupt breeding the breeding biology of endangered sea turtles and cause harm or death to seabirds, which can become disoriented and grounded by the lights. Once on the ground, the birds quickly fall prey to cats and other predators. On Kauai, for example, seabird fallout due to lights is a major threat contributing to the decline of the endangered Newell's Shearwater, a Hawaiian seabird whose population is now on a trajectory to extinction, having declined by approximately 75% in recent years.

Although light sources that impact wildlife and endangered species are not limited to those maintained by state agencies, this is a first step to reduce light pollution and may set the standard that other entities can follow as they move to deal with the issue and implement solutions.

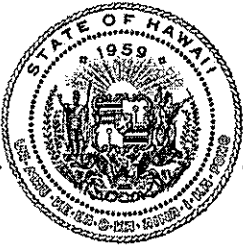
The Department supports the measure, which will contribute to a reduction of light pollution in Hawaii, reduce emissions of greenhouse gasses, and enhance the survival of endangered sea turtles and seabirds.

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

GUY H. KAULUKUKUI
FIRST DEPUTY

WILLIAM M. TAM
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
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STATE PARKS



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NEIL ABERCROMBIE
GOVERNOR

RICHARD C. LIM
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Statement of

RICHARD C. LIM
Director

Department of Business, Economic Development & Tourism
before the

**SENATE COMMITTEE ON
PUBLIC SAFETY, GOVERNMENT OPERATIONS, AND MILITARY AFFAIRS**

Tuesday, February 21, 2012

2:45 p.m.

State Capitol, Conference Room 224

in consideration of

SB 2402 SD1

RELATING TO LIGHT POLLUTION.

Chair Espero, Vice Chair Kidani, and members of the Committee. The department supports the intent of SB 2402 SD1 to minimize glare and light pollution in Hawaii's night skies.

Our department convened a Starlight Reserve Committee in July of 2010 to study the impacts of nighttime light pollution statewide and provide recommendations for a Starlight Reserve Strategy that would address these issues. The chairman of this committee, Dr. Richard Wainscoat, is providing testimony today on this measure.

In addition, we would request that care be taken to ensure that this bill does not weaken any existing county ordinances that mandate full shielding of outdoor lighting.

Thank you for the opportunity to testify on this bill.

NEIL ABERCROMBIE
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
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IN REPLY REFER TO:

February 21, 2012

**SB 2402, SD 1
RELATING TO LIGHT POLLUTION**

**SENATE COMMITTEE ON PUBLIC SAFETY, GOVERNMENT OPERATIONS &
PUBLIC SAFETY**

The Department of Transportation supports this Senate Bill 2402, SD1 with comments.

The DOT has testified on similar bills last session expressing concerns that implementation of new and replacement outdoor light fixtures be fully shielded will require coordination with the scientific and environmental parties to properly address our lighting needs and to ensure that energy waste, light trespass, visual confusion, sky glow, etc. are considered so as not to adversely impact the need for dark night sky in areas such as astronomy or the protection of endangered species in Hawaii. These considerations to maintain and ensure transportation safety and security are necessary.

Thank you for the opportunity to provide testimony.





UNIVERSITY OF HAWAII SYSTEM

Legislative Testimony

Written Testimony Presented Before the
Senate Committee on Public Safety, Government Operations,
And Military Affairs
Tuesday, February 21, 2012 at 2:45 p.m.

by
Virginia S. Hinshaw, Chancellor
and
Richard J. Wainscoat
Astronomer, University of Hawai'i at Mānoa
Chair, Light Pollution Working Group, International Astronomical Union

SB 2402 SD1 Relating to Light Pollution

Chair Espero, and members of the Committee. My name is Richard Wainscoat and I am here today to submit this testimony on behalf of the University of Hawai'i. The University of Hawai'i strongly supports this bill that is an important first step in reducing light pollution in Hawai'i.

Mauna Kea on the island of Hawai'i, and Haleakalā on the island of Maui, are two of the best astronomy sites in the world. Dark night skies are essential for these observatories to continue to operate. However, increasing urban lighting is threatening the dark night skies over these observatories. Light pollution extends well beyond county boundaries; lights from O'ahu have a major and growing impact on Haleakalā, and also affect Mauna Kea. Statewide legislation is needed to protect the observatories.

Astronomy in Hawai'i has a major economic impact. The present economic impact of astronomy is estimated to be \$150 to \$200 million per year.

The primary focus of this bill is proper shielding of outdoor lighting. Full shielding of lights is one of the most important techniques for protecting astronomical observatories from light pollution. Light emitted from poorly shielded fixtures at small angles above the horizontal travels enormous distances through the atmosphere, and is a major contributor to light pollution — it increases sky glow at remote locations, making it difficult or impossible to see faint objects. Fully shielded light fixtures emit no light above the horizontal, and therefore have much less impact on remote locations.

Full shielding also reduces glare, which is a very important safety factor, particularly for older drivers, and greatly reduces the impact of nighttime lighting on species that are affected by light at night, including endangered birds and turtles. Poorly designed and improperly shielded lights continue to be installed by government agencies, and a quick inventory of nighttime lighting shows that some of the most poorly shielded lighting is county and state lighting.

The present wording of SB 2402 SD1 affects only lighting by the state and state agencies. Careful use of all nighttime lighting in the State of Hawai'i — not just state lighting — including proper shielding, is required to protect the observatories.

From: mailinglist@capitol.hawaii.gov
Sent: Saturday, February 18, 2012 5:32 AM
To: PGM Testimony
Cc: Pandiorama@yahoo.com
Subject: Testimony for SB2402 on 2/21/2012 2:45:00 PM

Testimony for PGM 2/21/2012 2:45:00 PM SB2402

Conference room: 224
Testifier position: Support
Testifier will be present: No
Submitted by: Andrea Hamblin
Organization: Individual
E-mail: Pandiorama@yahoo.com
Submitted on: 2/18/2012

Comments:

Please support SB2402. Light pollution has a negative affect on the birds and turtles of the state. In addition, a dark night sky is important for astronomy. The modifications and expenditures necessary for a dark night sky are minimal especially considering the positive impact these modifications will make for maintaining a dark night sky for our wildlife and our researchers. Please support SB2402.