



**DEPARTMENT OF BUSINESS,  
ECONOMIC DEVELOPMENT & TOURISM**

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GOVERNOR

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Statement of  
**LUIS P. SALAVERIA**  
**Director**  
Department of Business, Economic Development & Tourism

before the  
**SENATE COMMITTEES ON WAYS AND MEANS**

Thursday, February 26, 2015  
9:00 a.m.  
State Capitol, Conference Room 211

in consideration of  
**SB 1157, SD1**  
**RELATING TO STARLIGHT RESERVE.**

Chair Tokuda, Vice Chair Kouchi, and Members of the Committee.

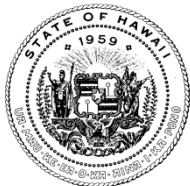
The Department of Business, Economic Development and Tourism supports the intent of this bill to change the status of the Starlight Reserve advisory committee from temporary to permanent.

The Starlight Reserve committee was originally established to develop and help implement a statewide strategy to reduce nighttime light pollution, or “skyglow,” which in turn will help preserve Hawaii’s dark skies for astronomy, protect endangered species, improve human health, and reduce nighttime energy consumption. Achieving this goal will require ongoing and coordinated efforts by the institutions represented on the Starlight Reserve committee as strategies to reduce nighttime skyglow are implemented by county, state, federal, and private sector institutions statewide. As such, we believe the life of this committee should be extended indefinitely to sustain the Starlight Reserve initiative.

We support this bill provided that its passage does not replace or adversely impact priorities indicated in our Executive Budget.

Thank you for the opportunity to testify on this bill.

DAVID IGE  
GOVERNOR



Testimony of  
FORD N. FUCHIGAMI  
DIRECTOR

Deputy Directors  
JADE T. BUTAY  
ROSS M. HIGASHI  
EDWIN H. SNIFFEN  
DARRELL T. YOUNG

IN REPLY REFER TO:

**STATE OF HAWAII**  
**DEPARTMENT OF TRANSPORTATION**  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

February 26, 2015  
9:00 a.m.  
State Capitol, Room 221

**S.B. 1157, S.D. 1**  
**RELATING TO STARLIGHT RESERVE**

Senate Committee on Ways and Means

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The Department of Transportation (DOT) **supports** the intent of this bill to extend the Starlight Reserve Advisory Committee.

The DOT finds its membership on the committee useful to maintain and ensure transportation safety and security are prioritized and that recommendations by the committee are thoughtful and economically feasible while protecting dark skies.

Thank you for the opportunity to provide testimony.



**SB1157 SD1**  
**RELATING TO STARLIGHT RESERVE**  
Senate Committee on Ways and Means

February 26, 2015

9:00 a.m.

Room 211

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The Office of Hawaiian Affairs (OHA) **SUPPORTS** SB1157 SD1, which allows the Starlight Reserve Advisory Committee to continue its work in defending the night sky, and helping Hawai‘i’s residents maintain a traditional and cultural connection to the stars.

The night sky is an important instrument for Native Hawaiians. In Hawaiian culture, stars, planets and the moon predict weather conditions, foretell events in the form of hō‘ailona, or omens, and serve as calendar and land markers. The night sky instructs farmers what to plant, fishers what to catch, and open-ocean navigators where to go. As Native Hawaiians continue to reconnect and revive ancient traditions, the integrity of the night sky becomes more and more significant.

Light pollution, particularly in heavily developed areas, has limited the ability of Native Hawaiians to learn about the night sky and use it as their ancestors once did. Moreover, artificial light represents a major threat to some seabirds, which also hold both cultural and ecological significance. For example, bright lights at night can blind and disorient Newell’s Shearwater fledglings, resulting in many of these young birds being hit by cars or preyed on by cats and dogs. Making permanent the Starlight Reserve Advisory Committee will allow it to continue its work in developing and implementing the statewide starlight reserve strategy contemplated in Act 161 (Reg. Sess. 2009), and defend an important part of the cultural landscape for Native Hawaiians, as well as protect our culturally and ecologically significant seabird species.

Accordingly, OHA urges the Committee to **PASS** SB1157 SD1. Mahalo nui loa for the opportunity to testify on this measure.



# UNIVERSITY OF HAWAII SYSTEM

## Legislative Testimony

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Written Testimony Presented Before the  
Senate Committee on Ways and Means  
February 26, 2015 at 9:00am

By

Robert Bley-Vroman, Chancellor

And

Richard J. Wainscoat, Astronomer

Institute for Astronomy

University of Hawai'i at Mānoa

### SB 1157 SD1 – RELATING TO STARLIGHT RESERVE

Chair Tokuda, Vice Chair Kouchi, and members of the Committee:

My name is Richard Wainscoat and I am here today to submit this testimony in my capacity as an astronomer at the University of Hawai'i, and as a member of Commission 50 of the International Astronomical Union. I strongly support the continuation of the Starlight Reserve Committee.

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. Statewide legislation is needed to protect the observatories. The economic impact of astronomy in Hawai'i is between \$150 and \$200 million per year.

The Starlight Reserve Committee was established by the 2009 legislature to address light pollution issues at a statewide level. Astronomers are not the only people affected by light pollution. Light pollution affects many endangered species across Hawai'i, including birds and turtles. It produces enormous energy waste. Poorly designed lighting compromises safety.

Act 161 asked the Starlight Reserve Committee to assist DBEDT to develop legislation to implement a statewide intelligent lighting and light pollution law that takes into consideration the following:

1. Develop rules regulating the requirements of outdoor lighting to guarantee the protection of night sky quality;
2. Incorporate measures to conserve energy and promote responsible outdoor night lighting;
3. Develop standards for intelligent lighting design in architecture, urban planning, engineering, and infrastructure development;

4. Strengthen statewide commitment to preserving the night sky by adopting intelligent lighting in the public sector;
5. Promote labeling to recognize intelligent lighting fixtures and products;
6. Develop alliances with both public and private entities primarily responsible for outdoor night lighting;
7. Develop measures to avoid obtrusive light and improve the quality of life of local populations; and
8. Educate local residents about existing solutions, as well as the environmental, personal, and energy-savings benefits that intelligent lighting entails.

Act 287 of the 2012 State Legislature added new requirements for state lighting in a manner recommended by the Starlight Reserve Committee. The requirements of this act become effective July 1, 2014. In order to eliminate cost, the changes in lighting mandated by the Act will occur over long time periods of time, as fixtures become old and need to be replaced. There is a corresponding need for the Starlight Reserve Committee to continue well into the future to monitor changes and improvements in light pollution as this Act takes effect.

Furthermore, many of the motivations for creating the Starlight Reserve Committee, including protection of astronomy, energy savings, and protection of endangered species are long term endeavors.

It is clear that the Starlight Reserve Committee still has much work to do. The work that the committee is doing is very important for the future of astronomy in Hawai'i and at the University of Hawai'i.

**Testimony Related to**  
**Senate Bill 1157 SD1**  
**RELATING TO STARLIGHT RESERVE**  
**Presented before the**  
**Senate Committee on Ways and Means**  
**The Twenty-Eighth Legislature**  
**February 26, 2015**  
**by**  
**Richard J. Wainscoat**  
**Chair, Starlight Reserve Committee**

Chair Tokuda, Vice-Chair Kouchi and members of the Committee. My name is Richard Wainscoat and I am here today to submit this testimony in my capacity as Chair of the Starlight Reserve Committee. The members of the Starlight Reserve Committee strongly support the continuation of the Starlight Reserve Committee.

The Starlight Reserve Committee is composed of representatives of the major stakeholders concerned with preservation of dark night skies in Hawaii. The committee brings together representatives from the state, the counties and the public, and is a valuable forum for exchanging information regarding nighttime lighting.

The Starlight Reserve Committee was originally created for two years, and has been extended twice, each time for an additional two years, by the Legislature. At its last meeting, the committee discussed its future, and unanimously recommended that the committee be extended. The committee felt that the major issues that it discusses, which include energy preservation, endangered species, astronomy, public safety and quality of life, are long-term issues. Because these are long-term issues, the committee believes that elimination of the sunset of the committee is more appropriate than simply extending the committee for two more years.

Lighting is presently undergoing a major transformation. There is a widespread change from traditional forms of lighting, such as incandescent, fluorescent, and high intensity discharge lamps to solid state lighting (light emitting diodes, or LEDs). LEDs offer lower maintenance costs and energy savings. It is particularly important that the starlight reserve committee continues to meet and provide advice during this transition period.

**Testimony Related to Senate Bill 1157 SD1**  
**Senate Committee on Ways and Means**  
**February 26, 2015**  
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It is clear that the Starlight Reserve Committee still has much work to do. The work that the committee is doing is very important for the future of astronomy in Hawaii, for energy conservation, for endangered species protection and for public safety at night.