

## WAI Committee

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**From:** Jay Penniman <jayfp@hawaii.edu>  
**Sent:** Thursday, September 11, 2025 2:55 PM  
**To:** WAI Committee  
**Subject:** Please reject Bill 109  
**Attachments:** 2025\_09\_08\_Water\_&\_Infrastructure\_Committee\_Testimony\_JFP.pptx; 2025\_09\_10\_Members of the Committee.docx

You don't often get email from jayfp@hawaii.edu. [Learn why this is important](#)

Members of the committee,

Please find my testimony and a small powerpoint with good justification for leaving the Outdoor Lighting Ordinance as it stands and rejecting bill 109.

Mahalo for your attention,

Jay

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Members of the Committee,

I do not remember how many months the CARE Committee, in 2022, spent collecting input and vetting opinions about updating the county's outdoor lighting ordinance, but it was at least 6. Opinions and needs were considered and a compromise bill was passed to greatly improve wildlife protections, human impacts of artificial light at night, and to move toward a return of dark skies over Maui County, while maintaining provisions for sports and recreation and public safety. This week the Water and Infrastructure Committee, with minimal public notice, heard and passed on to the full council a retraction of the core of the outdoor lighting ordinance. Corporation Council, Department of Public Works, and the member who introduced Bill 109 had a clear agenda to roll back the ordinance without full public input or full consideration of the facts. Corporation council presented biased testimony with their mainland consultants at the ready to present a one-sided interpretation of lighting needs and requirements, with questionable data, based on United States continental conditions, where traffic speeds are greater and overall conditions are not pertinent to our island infrastructure. THIS AIN'T THE MAINLAND!

This bill should be rejected and if not outright, the committee should hold adequately noticed (not the minimum required) hearings to examine all the relevant information and include the public in considering amendments.

Corporation council chose to present my email statements of eight years ago about the need for additional research on the effects of spectral content on seabird distraction, as if to claim that short wavelength light does not distract seabirds, because we lack sufficient data. In science we are always looking to study further to understand the wonders of the natural world. In the years after I sent the emails that Corporation counsel presented, additional peer-reviewed scientific studies have confirmed that short-wavelength light (i.e., "blue" light) attracts and causes the grounding of our imperiled seabirds.

There are documented cases of short-wavelength light harming our imperiled native seabirds. For example, on Kaua'i, in 2015 the Air Force installed lights low in long-wavelength (the "warm" color like that seen in Maui County's high pressure sodium streetlight fixtures) spectral content and high in shorter-wavelength light (~560nm; towards the "blue" end of the spectrum). This resulted in the largest fallout event of 'a'o (threatened Newell's shearwaters; 123 birds over 16 days) ever known in Hawai'i (Raine et al. 2024). And Rodrigues 2017 compares four different light types over three years and documents that the lights with the least blue-light content distract the fewest shearwaters.

Closer to home, the Maui Nui Seabird Recovery Project documented an increase in fallout of endangered 'ua'u (Hawaiian petrels) after DPW replaced HPS streetlights in Central Maui with LED streetlights that are higher in blue-light-content (8% for HPS vs. 12% for LED). While 10 'ua'u were reported as fallout from the HPS streetlights during the preceding three years (from 2016 to 2018), 18 'ua'u were reported as fallout from the new LED streetlights during the next three years (from 2019 to 2021), a near doubling of fallout. The higher the blue-light-content, the greater the harm to our imperiled native seabirds.

The director of Public Works made a statement, that it is not spectral content that distracts bird, but rather the intensity of the light. There is ample evidence to support the fact that short wavelength light does distract seabirds (and turtles). I fully agree that lights should always be run at the minimum intensity necessary for specific lighting conditions. The only way to eliminate seabird distraction by lights entirely is to turn off the lights. It is, however, possible to minimize distraction of seabirds by reducing short wavelength content (i.e.: reducing blue-light as the County's lighting ordinance currently requires) and also minimizing intensity.

I do not know when the bill will be heard by the full council but I do hope that there will be sufficient time to gather those who may rebut the testimony presented in the meeting.

If Public Works had implemented the existing outdoor lighting ordinance in a timely manner, and filtered the lights that were purchased, and have now gone out of warranty and also need new power supplies (pennies on

the dollar for filters and new power supplies), the cost savings of replacing the HPS would be being realized by now. Instead, they have burdened the taxpayers with continuing to pay for the more expensive HPS. They have rejected filters - why? Hawai'i Island is doing well with streetlights and airport lights and harbor lights - all filtered to reduce short wavelength content to less than 2%.

Public Works has also been offered a new, not filtered LED streetlight, which corporation council falsely called "parking lot lights", that complies with providing adequate illumination with less than 2% short wavelength content. What is the reason for this rejection? Public Works claims, with no data to substantiate it, that they would have to increase the intensity of the light to make up for the lack of short wavelength content. DPW says they have to have 70% CRI to be able to describe true colors. There is no standard for this claim. And colors have been adequately recognized under HPS, for decades, with CRI of between 21 and 30 %. The non-filter option offered to DPW has CRI of 50% and we have not seen any evidence that 50% CRI is not safe for roadway lighting.

Please do not continue the over-lighting of our nighttime habitat. Please continue to lead in environmental protection.

He ali'i ka 'āina, he kauwā ke kanaka.  
*The land is a chief, humanity its servant.*

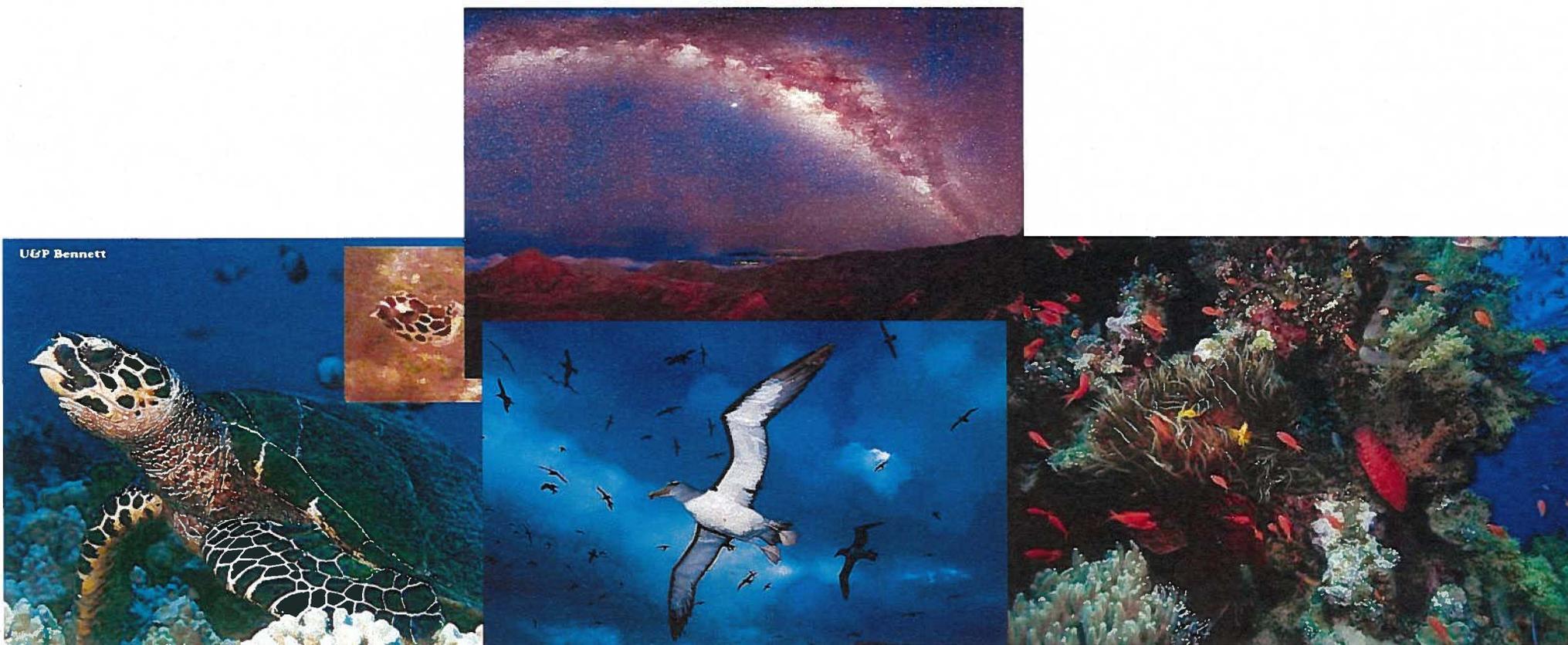
Mahalo for your consideration,

Jay

# WATER AND INFRASTRUCTURE COMMITTEE

September 8, 2025

BILL 109 SHOULD BE REJECTED – SHORT WAVELENGTH LIGHT AT NIGHT IS HARMFUL



UGP Bennett

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF FORESTRY AND WILDLIFE 1151 PUNCHBOWL STREET, ROOM 325  
HONOLULU, HAWAII 96813

February 24, 2022

Rowena M. Dagdag-Andaya, Director County of Maui Department of Public Works Engineering Division

DOFAW appreciates the intent to replace broken streetlights in compliance with lighting standards identified in §201-8.5, HRS. However, we have documented incidences of protected seabirds being downed at LED streetlights reported to have been rated at 4,000 Kelvin or less. The Division of Aquatic Resources is additionally concerned with the impacts of lighting on the nesting success of both ESA endangered hawksbill and threatened green sea turtles on Maui. We therefore recommend that those replacement LED lights being installed under an exemption from preparation of EA be designed or filtered so as to have a correlated color temperature of 2200 Kelvin or less, or a blue light content of less than 2%. Blue light content refers the ratio of the amount of energy emitted by the outdoor light fixture between 400 and 500 nm, divided by the amount of energy between 400 and 700 nm. LED lights with these specifications have been found to have fewer impacts on protected wildlife, including seabirds and turtles, and are consistent, for example, with lighting ordinances on the island of Hawai'i.

If you have any questions, please contact Paul Radley, Protected Species Habitat Conservation Planning Coordinator at (808) 295-1123 or [paul.m.radley@hawaii.gov](mailto:paul.m.radley@hawaii.gov).

Sincerely,

DAVID G. SMITH, Administrator

## SEABIRDS IMPACTED BY LIGHT POLLUTION ON ROBINSON CRUSOE ISLAND



Central Maui Lights – HPS

Seabird fallout – 2016-2018  
Old HPS street lights – 8% “blue”

10 Fallout Seabirds

Central Maui Lights changed from HPS to 3000 K LED

Seabird Fallout – 2019-2021  
New LED street lights – 12% “blue”

18 Fallout Seabirds