

Light Pollution in Waikiki - Part 2

Don't Look Up! Optical Radiation From New LED Lamps



LED "luminaires" are arrays of diodes. Without diffuser lenses the light is painful to look at

Waikiki is experiencing its worst environmental & public health crisis in generations.

With no safety data, no environmental impact assessments and no enforcement of weak city lighting regulations, the light-emitting-diode (LED) lighting industry is having a bonanza selling its energy-efficient, ultra-bright, ultra-white and ultra-powerful lamps not only to Waikiki but to the entire island of Oahu.

Waikiki is rapidly being floodlit by thousands of these unwatchable glaring white lights in shops, streets and condo garages. It is not just light pollution any more - it's **light abuse**. The worst is yet to come. The days of romantic warm "*Hawaiian Sense of Place*" tiki-torch-lit evenings are coming to an end as LED lights are now being placed everywhere, including right above the tiki-torch flames themselves. Soon Waikiki will look like AnyTown ShoppingMallUSA with the "visual blight" of over-lit shops and floodlit buildings. Our hard-fought state-wide ban on billboards and ugly outdoor advertising now finds *over-illumination is the newest form of promotion*.

And the City & County have announced that next year they will spend *\$50 million to convert 50,000 yellow sodium streetlights to new LED lamps island-wide*. They say that the lights will be a warmer color temperature and will be better shielded to direct light down but no public demonstration of these new lights has been made available. Take a short drive up *Likelike Highway* at night to see the miles of new LED lights that cast a ghostly bright white radiation across the road. Despite some shielding around the lamps, when you get within a few hundred yards of them you will experience an uncomfortable dazzle from the star-like luminaries above. Sorry if you are a bit older and your eyes show big starbursts around ultra-bright lights. Remember the national complaints about oncoming high-intensity car headlights several years ago?

The American Medical Association (AMA) in June this year issued a rare “**Community Guidance to reduce the harmful human and environmental effects of high intensity street lighting**”. They stated that:

“Strong arguments exist for overhauling the lighting systems on U.S. roadways with light emitting diodes (LED), but conversions to improper LED technology can have adverse consequences. In response, physicians at the Annual Meeting of the American Medical Association (AMA) today adopted guidance for communities on selecting among LED lighting options to minimize potential harmful human and environmental effects.”

The warning from the AMA News Room concluded:

“The guidance adopted today by grassroots physicians who comprise the AMA's policy-making body strengthens the AMA's policy stand against light pollution and public awareness of the adverse health and environmental effects of pervasive nighttime lighting.”

Try this quick test: Look up directly at a bare LED light array and watch it for five seconds (if you can!) Then look away and blink several times - you will surely see “retinal afterburn” images of the lights in front of you that will take 10-20 minutes to fade away. It's unlikely that any permanent damage has been done to your eyesight unless, of course, you have not uncommon age-related macular degeneration in which case you might well be making things worse. Nobody knows what years of looking at these LED lights will do to your eyesight but studies in rats suggest that the retina is damaged and will not repair itself.

If you buy a laser pointer in the US chances are that it will come with a safety label that warns against looking directly at the beam or shining it at anyone else. Although LED technology is very similar, no warning labels are mandated and the US Consumer Products Safety Commission has so far avoided the subject. **In the meantime it's not a bad idea to wear sunglasses at night in over-illuminated Waikiki.**



The Windsor condo in Hobron Lane is one of the worst examples of excessive and abusive LED over-illumination of its garage levels & front entrances - “like a prison yard”.

Take your own **LED Night Horror Tour** to see what is happening with LED attacks on Greater Waikiki:

The ultimate war zone is the Ala Moana Center's gargantuan garage. Thousands of unshielded and undiffused LED luminaires have been installed in all levels. It's impossible not to be dazzled, if not blinded, by them. The top deck is the ultimate nightmare - huge towers of LED lights that make the massive open deck look like a nighttime football stadium with light trespass abuse into thousands of nearby private condo windows. And also all over Ala Moana Park opposite that has now lost much of its nocturnal darkness



Midnight in rain - the Ala Moana Center's top garage deck is the worst of Light Abuse

Next - walk through the **Hilton Hawaiian Village Resort** complex. LED lights are already installed on their entrance trees and on top of their main tower a massive LED floodlight blazes cold light over their swimming pool and terraces.

Feel like a **stargazing walk on Fort DeRussy Beach**? Forget it - the entire length of the popular beachfront path is now over-lit with huge LED luminaire poles that floodlight the entire beach and waves in harsh white light. Poor marine creatures such as our honu must be more than disturbed by their new sci-fi nocturnal ocean environment.

Now head further to **Lewers Street shopping zone** with its neat artificial grass, palm trees and fancy shops flanking the packed Yard House pub. Those cute flaming crossed Polynesian Tiki-Torches are still blazing away to convince the tourists that they are in a warm glowing Paradise. Oh, but now there are super-bright LED lights everywhere that kill the torchlights and make the whole street look like any US shopping mall.



Lewers Street shopping precinct. Note LED lamp posts not yet switched on.

What to do? Tell the City to enforce its existing *Waikiki Special District Guidelines* on outdoor lighting that specify it should be “*subdued or shielded as to prevent glare and light spillage*”. And tell them to adopt *dark-sky friendly regulations like those of the Big Island* that keep their towns looking Hawaiian at night. Insist that LED lamps here be no whiter than 3000K warm color temperature. Not only does warm lighting make us feel happier, it does not harm our eyesight like ultra-white light containing excessive blue spectrum.

If you doubt that anyone can really fight City Hall, try creating your own **Personal Boycott List** of shops, restaurants, bars and condos that you think are violating your **Personal Right To Darkness**. You will feel better to follow your own moral compass on the LED lighting wars that are just beginning. Perhaps start with the *DFS Galleria* shops whose dazzling over-lit front windows effectively floodlight all of Kalakaua Avenue. And maybe add the new *International Marketplace* with LED floodlights on all its street front palm trees. Finally, walk up to the new *Longs Drugs building* that is brightly lit with a ghastly wall of LED lights. There are many other shops that are disturbing us by gross over-illumination.

The best solution would be for an *Expert Panel on Exterior Lighting* be convened to study the entire subject of the impact of new LED lighting on the Hawaiian state environment. Then maybe the new *Environmental Court* should weigh in to see if they intend to do anything to protect our *State Constitution's Article XI*:

“For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawaii's natural beauty and all natural resources...”

NEXT MONTH IN THE WAIKIKI WHISPERER:

Light Pollution in Waikiki, Part 3: LED lighting's adverse impact on nature