

FROM THE DESK OF
Michelle McSwain



February 29, 2024

Crook County Community Development
300 NE 3rd Street, Prineville, OR 97754

Dear Planning Staff and Commissioners,

Thank you for considering outdoor lighting standards for Crook County and for allowing the public an opportunity to comment. Below are the comments I wish to provide for consideration.

My husband and I have lived in Crook County for over 25 years at which time we moved to the flanks of Grizzly Mt. northwest of town where it was dark and quiet at night. However, over the years there have been changes, and light pollution has become glaringly apparent. Thus, I would like to commend you for including standard 124.XX.060 A.1. where glare from a neighboring property that is declared a nuisance is not exempt from the standards even if installed prior to the effective date of Chapter 124.

With the advent of intensely bright LED lights, neighbors located approximately 1/2 mile away from us have installed and leave on all night, outdoor yard lighting that shines into our bedroom window, illuminating our room. Even though friends who know the person with the outdoor lighting have explained to them the effects of their lights and have asked them to shield their light, the offending neighbor has not taken any action to alter the situation.

In addition, when we first moved to our Grizzly Mt location, Les Schwab (LS) Tire Center in the industrial zone had soft, orange-glow lights on the building. Viewed from ten miles away at our home, we would joke that it was "spaceship Les Schwab" as it looked like a spaceship encircled with lights. Fast-forward about ten years and now not only is the building itself encased in intense, bright and powerful LED lights, but the entire yard is lighted with dozens of these lights on tall poles. From ten miles away the lights dominate the horizon and fill the sky above Prineville with light pollution. Though I recognize that LS Tire Center is within the city and these county standards would not apply to them, I hope that in the future the county and city may work together to alleviate the light pollution emitted by Les Schwab.

Next, I would like to advocate for these standards to apply to Heavy Industrial Zones such as quarries and mines (124.XX.060 H), and to street and pedestrian lighting in a right-of-way (124.XX.060 S). In Chelan County, Washington, light pollution from installation of LED streetlights masked about half the previously stars visible. Additionally, scientists have determined that over the past decade, the night sky has become nearly 10 percent brighter each year because of artificial lights, mainly LEDs emitting too much glare (Patel, et. al. 2023).

In recent years, the traditional orange-tinted bulbs are being swapped out for energy-efficient, whiter and brighter LED lights. LED lights contain higher proportions of bluer wavelengths, which can affect people's nighttime patterns. They disrupt our circadian rhythms, lowering the performance of our immune systems. Also, the blue light emitted by LEDs scatter in the atmosphere more than other colors, so even hooded or shielded LED lights that are too bright (higher wattage than necessary) and

directed downward, will bounce and scatter upward. Thus, choosing the correct bulb wattage and temperature (bulb warmth or Kelvin rating) is paramount to maintaining or improving light pollution.

An article by the National Park Service (West, 2019) describes how the natural night sky is important for nocturnal animals. For example, light pollution interferes with the vision, foraging and dispersal activities of many mammals, and; hundreds of bird species navigate at night and are disoriented and veer off course causing them to slam into surfaces or circle endlessly, wasting crucial energy.

CNN also recently reported new findings about why moths and other insects circle outdoor lights (Nicioli, 2024). They aren't actually drawn to the glow, but rather trapped in a disorienting orbit around the light. There is also a growing body of evidence that artificial light at night is potentially contributing to declines in insect populations (Boyes, et al., Sept. 2020), crucial pollinators of the food we eat.

Due to the information stated above, outdoor lighting standards should apply to street and pedestrian lighting and Heavy Industrial Zones. The aggregate companies on Lone Pine Road are a good example of the need for lighting standards for quarries and mines. Although there is no work being conducted on site after dark, the sites are kept brightly lit with glaring LED lights that spill across the valley. If lighting standards are not applied to these aggregate sites, major contributions to light pollution would go unaddressed.

Improving our night sky would go a long way to:

- Maintain Prineville's small town feel and culture;
- Don't Bend Prineville;
- Attract Astro-Tourism to include Crook County, not just Prineville State Park.

In closing, I congratulate you for considering outdoor lighting standards in Crook County and I encourage you to adopt these standards, including the recommendations made in this letter.

Sincerely yours,



Michelle McSwain

Citations:

Boyes, D.H., Evans, D.M., Fox, R., Parsons, M.S., Pocock, M.J.O.. Sept. 13, 2020. Insect Conservation and Diversity, Royal Entomological Society.

Nicioli, Taylor. Feb. 7, 2024. Moths Actually Aren't Drawn to Light As Previously Thought, Study Finds. CNN.

Patel, K., Perry, K., Wolfe, D. Sabens, E. June 2023. LED Lights Are Meant to Save Energy. They're Creating Glaring Problems. Washington Post.

West, Julie. April 19, 2018. Animals Need the Dark. National Park Service.