

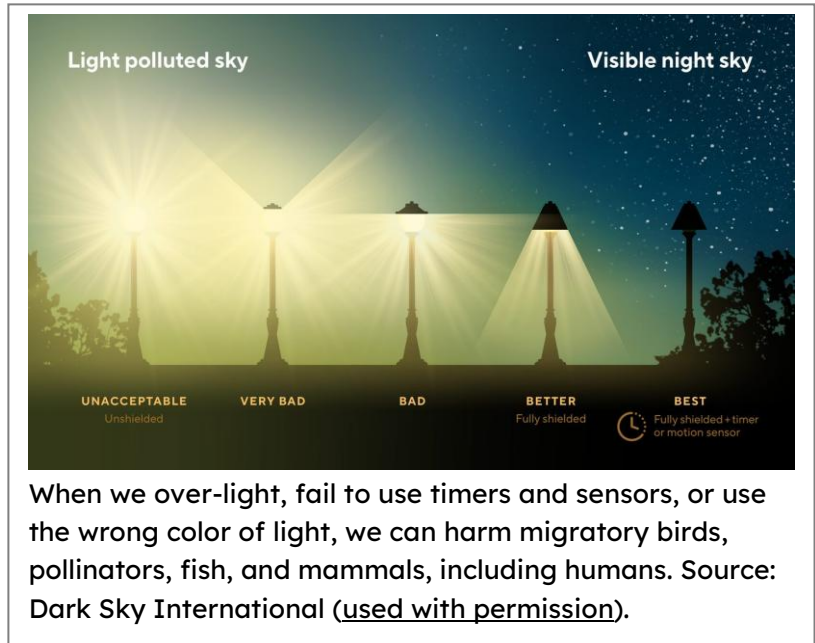
LIGHT POLLUTION

FACT SHEET | P.1

What is light pollution?ⁱ

The following definitions are direct quotes from Dark Sky International's glossary webpage:

- **Light pollution** is the human-made alteration of outdoor light levels from those occurring naturally.
 - **Glare** – excessive brightness that causes visual discomfort.
 - **Sky glow** – brightening of the night sky over inhabited areas.
 - **Light trespass** – light falling where it is not intended or needed
 - **Clutter** – bright, confusing, and excessive groupings of light sources
- **Lumen**- a measure of the total flow of light from a lamp, luminaire, or other light sources [i.e., the amount of light a lamp emits]
- **Illuminance**- the amount of light falling on a surface [unit: foot-candle (imperial) or lux (metric) which is one lumen per square meter]
 - The full moon is approximately 0.3 lux, or ~0.03 foot-candles
- **Luminous intensity (aka intensity)** – a measure of the brightness of a point source [units: candela or lumens/solid angle]



Impacts of Light Pollution

- disrupts the circadian rhythms of people as well as urban-dwelling and migrating birds, bats, and even aquatic animals, particularly in coastal zones, rivers, estuaries, and nearshore areas.ⁱⁱ
- affects plant physiology by altering growth, timing of flowering, and resources allocation
 - cascading effects on the migratory patterns of pollinators and seed-dispersers that rely on nectar, pollen, seeds, and fruits for food.
- disconnected humans from our natural circadian rhythms, pushing us to exercise, eat, or sleep at random, contributing to insomnia, depression, obesity, and loss of night vision.ⁱⁱⁱ

LIGHT POLLUTION

FACT SHEET | P.2

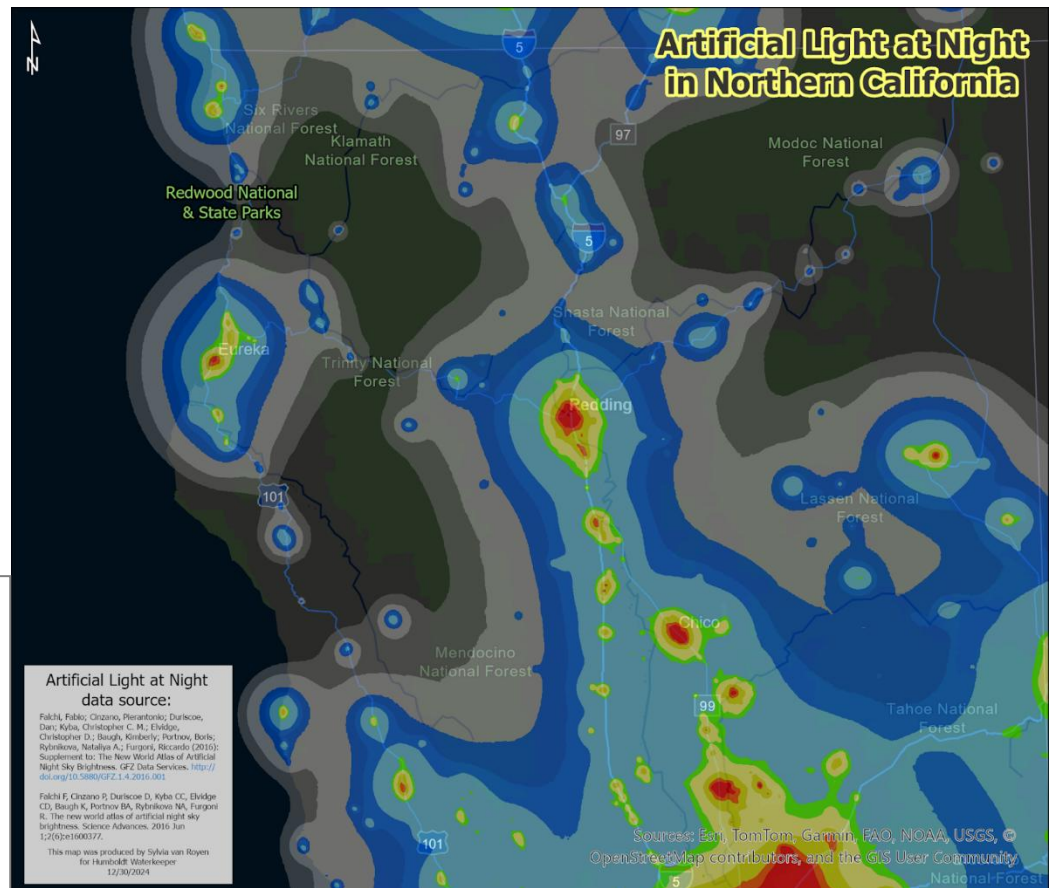
What can we do?

Follow Dark Sky International's recommendations for limiting light pollution from your lights:

- Use fully shielded fixtures that point light downwards
- Use the least amount of light necessary to safely light the area—excessive light harms wildlife
- Utilize timers, dimmer switches, and motion sensors to turn off lights when not in use
- Turn off indoor lights at night that are not necessary
- Use lights with a color temperature of 3,000 K and below to reduce blue light, which is harmful to many animal species

Municipalities can utilize Dark Sky International's Municipal Code Template, which was written with the help of lighting engineers and lawyers!

This map shows the luminance of artificial light at night in the Eureka, thanks to the folks at World Atlas of Artificial Sky Brightness. Light from the Humboldt Bay area impacts the sky as far away as Cape Mendocino.



ⁱ DarkSky International (July 25, 2023). Glossary. Accessed 3-17-2025. <https://darksky.org/resources/glossary/>

ⁱⁱ Rodrigo-Camino, J; Seeling, S; Seeger, M.; Ries, J. (2023) Light Pollution: A Review of the Scientific Literature. *The Anthropocene Review*. Vol. 10(2) 367-392. <https://doi.org/10.1177/20530196211051209>

ⁱⁱⁱ Pothukuchi, K. (2021). City Light or Star Bright: A Review of Urban Light Pollution, Impacts, and Planning Implications. *Journal of Planning Literature*, 36(2), 155-169. <https://doi.org/10.1177/0885412220986421>