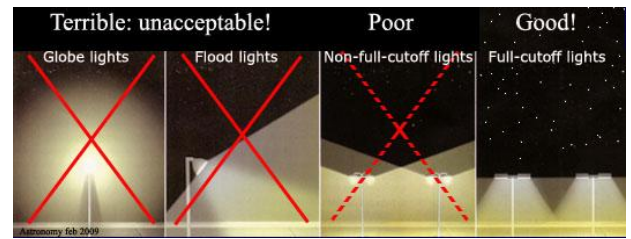


ARE YOU DOING YOUR PART TO REDUCE OUTDOOR LIGHT POLLUTION?

Light Pollution is one of the fastest growing and most pervasive forms of environmental pollution, according to many medical researchers, environmentalists, and naturalists.

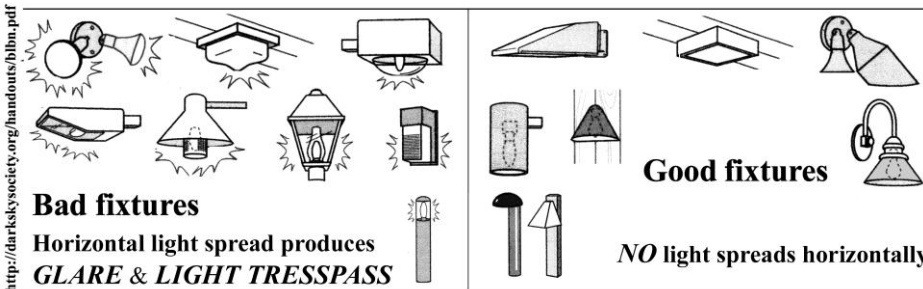
What is Light Pollution?

- Glare:** light that shines horizontally and directly into a person's eyes
- Light trespass:** unwanted light (from floodlights, security lights, streetlights) that spills onto property which would otherwise be dark
- Over-illumination:** artificial lighting that is brighter and on longer than required for a specific activity
- Sky glow:** bright halo over urban, suburban, and some rural areas at night due to bad outside lighting



GOOD NEIGHBOUR, SKY-FRIENDLY OUTDOOR LIGHTING

- IS AESTHETICALLY ATTRACTIVE & ENHANCES NEIGHBOURHOOD APPEARANCE
- MINIMIZES THE ADVERSE EFFECTS OF LIGHT POLLUTION ON HUMAN AND WILDLIFE HEALTH
- PROTECTS EVERYONE'S SAFETY ON PRIVATE AND PUBLIC PROPERTY
- PREVENTS LIGHT TRESSPASS & RESPECTS THE RIGHTS OF ONE'S NEIGHBOURS
- SAVES ENERGY, MONEY, AND THE ENVIRONMENT & KEEPS THE NIGHT SKY UNPOLLUTED



Help eliminate light pollution in your neighbourhood: Select best full-cut-off fixture(s) for your need. Light should be directed to the ground. Turn on outdoor lights *only* when they are needed.

Don't want to replace bad fixtures? Install shield around bad fixture to prevent glare & light trespass. *No need to buy:* make your own from cardboard, painted with outdoor paint.

LIGHT POLLUTION IS BAD FOR HUMAN HEALTH, ECOSYSTEMS, & THE ENVIRONMENT BECAUSE IT *DISRUPTS* CIRCADIAN (~24 HOUR) BIOLOGICAL RHYTHMS!

- Plants and animals, including humans, have **internal** biological clocks that are adjusted by the **external** daily light-dark cycle.
- Light Pollution** alters the natural pattern of light and dark and hurts diurnal and nocturnal species by **disrupting**:
 - Physiological rhythms**, including hormone levels.
 - Behaviour patterns**. Light pollution alters behaviours, foraging areas, timing and routes of migrations, and breeding cycles of animals (insects, birds, fish, mammals, and many other species).
 - Growth & Reproduction**, leading to population declines and secondary effects on other species. In plants, continuous lighting depresses chlorophyll production in leaves and alters the balance between vegetative growth and flowering.
 - Food chains & ecosystems**. Insects are essential pollinators for many plants & primary food source for many animals, including songbird hatchlings, which need protein from insects and spiders to survive. Decline in insect diversity & population sizes negatively affects plant species (crops, shrubs, trees) that provide habitat for other species. Prolonged exposure to artificial light may prevent **trees/plants** from adjusting to seasons, compromising natural habitats. Light Pollution contributes to lower water quality by preventing zooplankton from feeding on algae, which grow more in light!

LIGHT TRESSPASS FROM OUTDOOR LIGHTING HAS INDOOR EFFECTS!

The 24-hour day/night cycle (circadian clock) regulates physiologic processes, brain wave patterns, hormone production, cell regulation, and other biologic activities. **Artificial light from outside at night** may de-regulate a person's biological clock, cause altered hormone production, disruption of healthy sleep patterns, and other adverse effects on health. This is because the hormone **melatonin**, produced by the pineal gland, is secreted at night (in darkness) and helps regulate the body's biological clock. **Melatonin levels drop precipitously in the presence of light.** Disruption of the circadian clock is linked to numerous medical disorders in humans (e.g., depression and other mood disorders, insomnia, cardiovascular disease, cancer, obesity, early-onset diabetes). This is not surprising because the circadian cycle controls at least ten to fifteen percent of our genes.

From time immemorial, humans have marvelled at the night sky, and found inspiration, knowledge, understanding, and pleasure in its beauty....

A child born today has less than a one in ten chance of ever experiencing a dark sky.



Sources & for more information: www.darksky.org;
www.starrynightlights.com/pIndex.html; <http://www.darkskysociety.org/handouts/landscapeandlighting.pdf>; <http://victoria.rasc.ca/LPA/Default.htm>

**PLEASE SHARE THIS FLIER WITH FRIENDS, NEIGHBOURS, and CO-WORKERS
TALK TO YOUR MUNICIPAL COUNCIL ABOUT FULL-CUT-OFF STREET LIGHTS IN YOUR NEIGHBOURHOOD**

Prepared by RASC-Victoria (www.victoria.rasc.ca/)