

Light Pollution – The Problem of Light Trespass – 1/2.



Light trespass is unwanted light intruding onto a person's property or area of concern. This home in Calgary is suffering greatly from light trespass from the streetlights located near this corner.

These cobra-head lights scatter much of their light not only over the intersection, but the adjacent properties as well. This trespass may create problems for the occupants who must sleep with the intrusion of this high degree of unwanted light at night.

Most of us are familiar with noise trespass, such as the extra loud sound of our neighbor's stereo or car stereo. The continual thump-thump of the bass or the wailing of high frequencies has incited more than one individual to take the law into his/her own hands and attempt to alleviate the unwanted sounds.

The same situation applies to light trespass. We may have neighbors who have very bright yard lights which are often on and shine directly into our living rooms or bedrooms and keep us awake at night.

Streetlights, as in the photo above, are the most common source of light trespass. The assumption is made that people want lots of light in their neighborhoods in order to combat crime. However, research shows that increased light does not combat crime, but may actually encourage it. High levels of lighting only serves to give residents a false sense of security.

Researchers note that when 'security' lights on buildings have been shut off, vandalism has ceased. Vandals or criminals also require light to see what they are doing and to detect any security that is in place, such as security guards, cameras or dogs. When they cannot see what they are targeting or what they are doing, they are discouraged from vandalism or crime.

Humans require dark conditions in order to sleep properly and maintain their circadian rhythms. These vital rhythms are responsible for ensuring that the person's health is maintained.

"A **circadian rhythm** is a roughly-24-hour cycle in the biochemical, physiological or behavioural processes of living beings, including plants, animals, fungi and cyanobacteria. The term "circadian", coined by Franz Halberg,[1] comes from the Latin *circa*, "around," and *diem* or *dies*, "day", meaning literally "approximately one day." - Wikipedia

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Once these rhythms have been disturbed, they are often difficult to re-establish. The sufferer may even require therapy in order to properly recover his/her circadian rhythm and this may take some time to accomplish.

Loss of sleep and disturbance of the circadian rhythm may eventually lead to a wide variety of serious health concerns including irritability, digestive problems, stress, inability to concentrate or focus, problems at work, increased chance of accidents, problems with relationships, general sick feelings, depression, etc.

For some people, the effects are far more pronounced and have far greater impact. The amount of cancer in humans has been increasing with the amount of light to which we are subjected at night. Recently, the Danish government has begun to compensate women who developed breast cancer while working night shift. Melatonin, the hormone which suppresses tumor development, is produced at night and it appears that light at night interferes with its production in the human body.

To combat light trespass, many people use blackout blinds and/or night masks. One can also request that those responsible for streetlighting in your neighborhood replace the fixture with a complete cut-off variety or add a shield to the current fixture to keep the light from trespassing on your property.

Sensor-based area lighting helps to limit the time a light is on and to reduce the amount of light in the night sky, also reducing light trespass.

Areas that are over-lit by street and area lights also affect circadian rhythms in the flora and fauna in your yard and in the surrounding areas.

Identify the sources of light trespass in your area and contact those responsible to discuss ways in which the problem may be reduced or eliminated. Take a positive approach and some possible solutions to the meeting. Those responsible for the light trespass may actually save money by switching to viable alternatives. Investigate and encourage light trespass bylaws with your town or city officials and councilors.



This semi-cut-off light fixture not only lights the street and the sidewalk, but half the cul-de-sac and the neighboring yards with its garish orange glow.

Many areas of North American cities suffer light trespass and are over-lit by streetlights and other lighting fixtures.