

# Night Skies

Through the Docktalk program, FOCA encourages landowners to help stop light pollution in night skies.

Why? The benefits include:

## Dark skies full of stars

During a moonless night, you should be able to see 2,500 to 3,500 stars and the Milky Way. Star gazing can be an amazing family activity that invokes scientific curiosity, imagination, and discussions of our past, culture, and future. It's estimated that today, only one in ten children will see a sky full of stars. Because of light pollution, people in cities generally see less than 100 stars on a 'good' night.

## Better nighttime visibility, less nuisance glare

Glare is the visual discomfort and hindrance from unshielded light that hits your eyes directly, so you see the bulb or light source instead of details in the lit up area. Glare can create shadows that mask danger. Lights that are shielded to prevent light from escaping sideways and up into the sky reduce glare, thereby improving visibility.

## Increased safety on land and water

Studies indicate that crime levels are independent of lighting. Too much light and poorly designed lighting hinders visibility making areas less safe. Light pollution from unshielded, broad range lights near lakes is made worse by the reflection off water. Glare from land lights reduces boaters' ability to see navigational lights, e.g. buoys, and increases shadows as boaters approach docks and navigational hazards.

## Energy and monetary savings

Fixtures that allow light to flow sideways and up are wasting that light energy—up to 30 per cent! And because many people think brighter means better, they use higher wattage bulbs than needed. It's estimated that the sky glow over the US represents more than a billion dollars of wasted energy.

## Protection of wildlife and lake ecosystems

Light plays myriad roles in nature: changing light patterns can disrupt an ecosystem's balance. In water environments, daily cycles for organisms such as zooplankton are controlled by light, while others, such as fish, are attracted or repelled by it. Studies show that moths, fireflies, salamanders, frogs, song birds and other wildlife are affected when artificial nighttime lighting influences navigation, predator-prey relationships, foraging behaviour, reproduction, mating, and other biological and ecological characteristics.

## Your Health

Our bodies run on a 24-hour clock, part of which relies on cycles of light and dark. Researchers are investigating a link between nighttime light and increased risks of cancer. Nighttime light can disrupt the release of melatonin, a hormone that appears to play a role in protection against cancer, as well as other health benefits.

**Light pollution** is created by artificial light at night and includes the glow surrounding cities from above (sky glow), glare, wandering light (or light trespass), excess lighting, and lighting that affects wildlife.

► Find out how you can have a dark night sky...

## HOW ?

### FOCA encourages landowners to help prevent light pollution.

#### Talk about light pollution

Light pollution is a serious problem, but many people don't know that light can be a pollutant, especially for wildlife. Lack of knowledge about glare and light trespass perpetuates purchases of bad lights and bad lighting design. When shopping for lights ask questions and seek out lights that reduce light pollution.

#### Light for necessity

Use lights only where and when necessary. Nighttime lighting in cottage country is typically used for security and walking safety, but too much light can cause a loss of visibility. And if no one's around, lights left on are wasting money and could harm wildlife. Avoid using one big, bright light to illuminate a large area.

#### Choose glare-free lights, and stop annoying the neighbours

Lights that are shielded to direct light down on targeted areas stop light from escaping sideways and up. They prevent light from shining into neighbours' windows, lighting their property, or glaring across the lake. Most noticeably, shielded lights reduce glare and sky glow. Technically such lights are called 'full-cutoff' or 'partial-cutoff' fixtures, but manufacturers are more likely to use the terms 'neighbour friendly' or 'glare free'.

#### Aim lights down and away from water

Choose lights that direct light onto the ground, where it's needed. Placing shielded fixtures high up helps illuminate larger areas. When positioning lights, a common mistake is to aim them out at too high an angle. Avoid landscape lighting that sends light from the ground up and dusk-to-dawn lights that shine all night.

#### Install lower wattage bulbs

Choose the appropriate level of light for the task, e.g. path vs. dock. Just because a fixture accepts a 100-watt bulb doesn't mean you have to use one. Often, a lower wattage bulb, used in combination with shielded fixtures and proper aim, will effectively light an area—saving energy and improving visibility. Coach, or carriage, lamps may look great, but they shine light in all directions. *Already got one?* Use 25-watt chandelier bulbs to reduce glare.

#### Use dimmers and timers

Bright light is not always needed; dimmers allow the option to be there when it is. (Always check that the light will work with a dimmer.) Timers work well with decorative lighting and will turn lights off when they are not needed (saving money and reducing light pollution).

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#### Resources online:

[www.foca.on.ca](http://www.foca.on.ca)  
[www.darksky.org](http://www.darksky.org)  
[www.muskokaheritage.org/natural/torancebarrens.asp](http://www.muskokaheritage.org/natural/torancebarrens.asp)  
<http://skytonight.com/resources/darksky/www.rasc.ca/light/>  
[www.lightpollution.it/dmsp/](http://www.lightpollution.it/dmsp/)

#### Your local contact:

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