

# **Can Outdoor Lighting Harm the Marine Environment?**

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My grandfather purchased our family property on the Rideau Lake in the 1920s. In the 1960s, the stars reflected off the water as we fell asleep. By the 1980s, this had all changed. The lake was evolving into a virtual urban subdivision with fast boats, outdoor sound systems and lighting systems that were left on after the occupants had gone to bed. The stars were gone. But we can bring them back.

The waterway is an important ecosystem that supports wildlife in the water and adjacent lands. There are setback requirements for buildings to protect this wildlife. But few people consider the impact of outdoor lighting on the nighttime environment.

The dark of night is just as important to wildlife as the daytime. Our ubiquitous outdoor light damages the river and lake environments in two ways.

From the human point of view, bright lights along the shoreline make it difficult to navigate the channel. Glare from unshielded lighting prevents us from seeing markers and channel hazards.

The second impact is on the aquatic and land plants, and fish. Fish are attracted to the light from their natural feeding depths. Artificial lighting also causes fish and plants to perceive a longer day and this confuses the cues to seasonal change. Plants flower too late (and some too early) to be properly pollinated.

But what about security lights? Although outdoor lighting makes some people feel safe – the light actually puts their property on display for thieves and vandals. The vandals don't even need a conspicuous flashlight to see what they are doing – the homeowner provides the light for them. Besides, most people leave on their outdoors lights when they go to bed. There is no one to see what is going on. Security must be monitored to be effective.

What can we do to help protect the environment, improve security and safety?

1. Keep lights back from the shoreline and shield them so their light does not shine onto or across the water.
2. Replace or shield all outdoor lighting fixtures so they don't shine over your neighbour's property and into their bedroom windows. Since you can see much better without glare, reduce the bulb wattage.
3. Turn off outdoor lights when you are indoors.
4. Use motion detector switches to trigger lights. They will signal someone's presence.

All this will help save electricity and it will help bring back the stars.