



How Light Pollution Affects the Sunapee Watershed

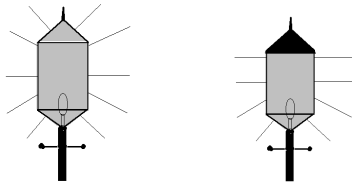
FLOODLIGHTS

Aim down on what you want to light up



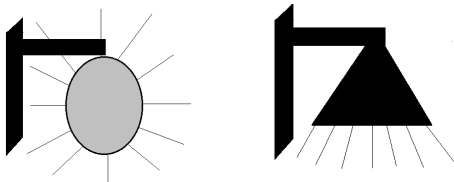
POST LAMPS

Opaque top prevents useless light from shining straight up where it does no good



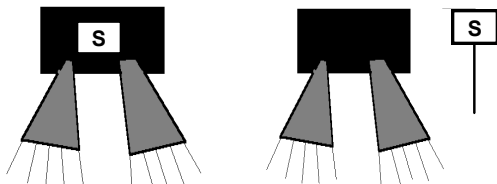
WALL LIGHTS

Aim down on what you want to light up and use horizontal cut-off to prevent glare



MOTION DETECTORS

Place sensor in motion detector (S) away from light it controls



★ At night, certain aquatic organisms rise to the surface to feed on algae. Light pollution discourages this rise. The result is an increase in algal blooms and decrease in water quality.

★ Outdoor light attracts bugs! More spiders are found in well-lighted areas and their webs are fuller than those in darker areas.

★ Young trout come to the surface of the water to feed at night, and their primary food source is opossum shrimp. Too much night light deters the shrimp from rising to the surface, which has a negative impact on the trout population.

★ Many species of birds, especially insect eaters, migrate at night and are guided by the constellations. Inability to see the night sky or distractions of tall lighted structures disrupt the migratory patterns and result in the deaths of many birds who fly around the lights until they drop from exhaustion.

★ Deciduous trees and shrubs are fooled by artificial light and continue to grow in autumn, when they should be becoming dormant. As a result, they do not harden properly and become weakened.

★ Frogs are harmed by artificial light. It negatively affects their reproduction, ability to find food and ability to escape predators.

★ There are no polar bears here, but some on the North Slope showed their dislike for outdoor lighting by systematically destroying the lights on the airstrip in the village of Kaktovic.



A Guide to Responsible Lighting



Lake Sunapee Protective Association
Devoted to the Environmental Quality of the Watershed

68 Main Street, PO Box 683
Sunapee, NH 03782
Phone: 603-763-2210
FAX: 603-763-2077

Email: lspa@lakesunapee.org
Web Address: www.lakesunapee.org

Responsible Lighting

How to Save The Beauty of the Night

What Is the Problem?

Remember looking at the Milky Way, shooting stars and the constellations? Remember being on your dock on a warm summer night and looking at the stars reflected in the water? It's not so easy to see our night sky anymore, because it's filled with light.

We worry about safety and security and try to extend the hours during which we can enjoy the outdoors, so we light up our world. Each year the U.S. alone wastes nearly a billion dollars on ineffective illumination that is aimed right up into the sky.

In addition to the financial waste, improper lighting has profound adverse effects on migrating birds, nocturnal creatures, fish, and even plants.

Are You a Good Neighbor?

Part of the greater Lake Sunapee area experience is to be in a more natural environment than in the cities and the suburbs. We are more conscious of excessive noise than we are of intrusive lighting. Many enjoy the peace and quiet of the area. Think about enjoying the peace and *darkness*.

Do you have lights that illuminate more than your own property? Do they shine into or on someone else's home? If so, you could be depriving others of the opportunity to fully experience this country setting.

What is Responsible Lighting?

Responsible lighting minimizes the problems of glare, light trespass, and sky glow.

Glare occurs when we see light from a light fixture rather than the object the fixture is intended to illuminate. Glare is the result of poorly designed or poorly installed lighting. Glare severely hampers vision, creating a hazard rather than providing security.

Light Trespass occurs when your lights impact others' property. It is most often caused by glare. Light trespass is not only unattractive but is an invasion of privacy. It is simply the result of poorly aimed and/or improper fixtures. Glare is made worse when it reflects off the water or snow and becomes more widely dispersed.

Sky Glow is the result of lighting that is either aimed upward or is reflected upward. Much of this is from commercial lighting, but improper residential lighting contributes to the problem.

Is Light Pollution Really a Problem?

In a word, yes. There is ever increasing evidence that light pollution has a negative impact. Some of it may seem to us to be inconsequential, but on the back of this brochure there are specific examples of how it affects the Lake Sunapee watershed.

What Can Each of Us Do?

All of your lighting objectives can be met without creating problems for the environment or your neighbors.

- ☞ Only provide as much light as you need. Think about how bright a full moon is, yet our lighting is often 100 times brighter.
- ☞ Turn off the lights when you don't need them.
- ☞ Eliminate glare by shielding the light fixture so that you don't see the bulb.
- ☞ When possible, use "full cut-off" lighting, which cuts off any light above the horizontal.
- ☞ Retrofit existing fixtures with caps or shields which allow the light to disperse.
- ☞ Install motion detectors on outdoor floodlights. The sudden change in light caused by a triggered motion detector provides more security than constant floodlighting.
- ☞ Eliminate lighting within 50 feet of shoreline. Use a flashlight.
- ☞ Encourage your town to adopt lighting guidelines for commercial properties that will result in a village atmosphere.
- ☞ Give copies of this brochure to people who should have more information about light pollution.