

THE PROBLEM

Life evolved with light and dark as a strong daily cycle that regulates the physiology and behavior of most species, including humans. Periods of both light and dark are essential for ecological health.

- ❖ **Light pollution** is unnecessary or excessive artificial light. It is exacerbated by poorly designed lighting.
- ❖ **Light trespass** is poorly controlled lighting that crosses property lines and hurts property values.
- ❖ **Light pollution** and **light trespass** harm nature, waste energy, and contribute to climate change.

Energy-efficient light-emitting diodes (LEDs)

can be a harmful color (often too white @ >2700Kelvin) and waste energy whenever they are too bright or unnecessary.

Human health and safety suffer. Glaring lights can blind and distract drivers, especially in wet weather. Many species suffer serious negative impacts, including numerous pollinators, bats and birds.

Outdoor lights should be shielded and should only be installed and used *as needed* to protect wildlife and people and to prevent light pollution and trespass.

Current laws are too limited in their application and scope. A much broader approach is needed.

A COMPREHENSIVE SOLUTION

Enforce Existing Legislation

Connecticut has existing, poorly enforced legislation (for example, CGS §13a-143d, §§3 and §4, CGS §13a-110a, §4b-16) that limit light trespass from utility floodlights, mandate energy conservation, and limit light installation, pollution and trespass on state roads and properties.



Light pollution and light trespass are both present here in the glare, lack of shielding, stark white color, and spillover of light in all directions and past the property line.

Reducing light pollution has multiple immediate benefits at little to no cost and saves energy

Pass New Legislation

The problem is getting worse. State policy and legislation can be a model for all public and private properties.

Dim the Lights and Lead by Example!

Outdoor lighting should:

- 1) be installed and used only **as needed**, saving money and maximizing energy conservation going forward.
- 2) always avoid light pollution, glare, and light trespass with shielding, dimming, timers and/or motion sensors.
- 3) be limited to 2700K maximum color temperature and low lumens (<1800).

FAST FACTS

- ❖ **Public education is essential.** Public and private entities need clear information on proper light choice and installation to prevent light pollution and trespass. Many do not know that light can cause harm.
- ❖ **Timers, dimmers, and motion sensors** save wildlife, protect our health and save money and energy. They are underused on public and private property and should be the default.
- ❖ **Quality and context matter:** More light does not always prevent crime. In Chicago, each of the three crime categories experienced an increase in reported incidents between the pre- and post-installation period of alley lighting:
 - Violent Index offenses (up 14%)
 - Property Index offenses (up 20%)
 - Non-Index offenses (up 24%)
- ❖ **Light pollution and light trespass are increasing, and the light spectrum is changing.** This is due to land development and redevelopment, and as quantified in Europe, LED installations that are too bright and too white (which is especially harmful).
- ❖ **Human health impacts are well known.** They include poor sleep and impacts on immune function, cognition, and mental health issues (including in children, who may be already struggling).
- ❖ **Wildlife needs the dark.** Because the majority of species are nocturnal, lighting strongly disrupts navigation, foraging, mating and migration. Light pollution defeats many efforts to support nature (e.g. Pollinator Pathway programs).
- ❖ Several communities in Connecticut have passed ordinances to prevent light pollution (Milford, New Haven, Newtown, Stamford).

Unlike many environmental problems, light pollution and trespass are easily reversed and prevented.

- ❖ **Lights Out Connecticut** is focused on strategies to prevent death and injury to migratory birds. Beyond outdoor lighting, it's important to turn off essential interior lighting at night, especially on upper floors. <https://www.lightsoutct.org/>
- ❖ **DarkSky International** is the recognized authority and is the leading organization combating various forms of light pollution worldwide. The vision of DarkSky International is fundamental and inclusive. <https://www.darksky.org>

The night sky, filled with stars, is celebrated and protected around the world as a shared heritage benefitting all living things.

Reducing light pollution and light trespass will save money and energy, help our health, and help other species.

MORE INFORMATION

Leo Smith

International Dark Sky Association
860-668-6000
leo@smith.net
<https://www.darksky.org>

Lights Out CT

contact@lightsoutct.org
<https://www.lightsoutct.org/>

Susan A. Masino, Ph.D.

Old Growth Forest Network, Hartford County
Susan.masino@trincoll.edu