Light pollution is one more thing to consider when hanging those colorful holiday strands

November 29 2021, by Frank Witsil

Credit: Pixabay/CC0 Public Domain

Hanging holiday lights?

Here's something else to think about: light pollution.

Some municipalities, including Ann Arbor, Michigan, along with several states have enacted laws in recent years—sometimes called dark skies legislation—to reduce lighting, arguing that it promotes energy conservation, public safety, esthetic interests, and astronomical research.

The concept of light pollution is a new one compared to concerns about polluted rivers and lakes and air. But it's a growing one that many scientists and legislators are taking seriously.

It's especially significant in Michigan, which is trying to attract tourists to its outdoor parks that are perfect for stargazing. And by one account, Detroit is America's second-most light-polluted big city.

It may come as a surprise, given years of hearing about how lights help deter crime and make neighborhoods feel festive. But scientists are now weighing in on how lights affect nocturnal animals, plants—and, human health.

Ann Arbor's City Council passed its outdoor lighting ordinance this fall.

"The new outdoor lighting regulations intend to enhance the quality of life in the City of Ann Arbor," said Brett Lenart, planning manager. "This will occur through reduction in light trespass, glare and energy consumption, with benefits to a multitude of living things—us included."

Private property lights, including those Christmas displays, are still allowed for 90 days. Existing lighting that doesn't meet the new rules may be maintained, but replacement lights must be compliant.

New light fixtures also must be partially shielded, depending on the type of installation. And decorative building and landscaping lights are prohibited between midnight and 6 a.m., except for businesses open during those hours.

Parking lot lighting is limited to what the city calls 6-foot candles and they must be extinguished beyond business hours for non-residential uses.

But before you breathe a sigh of relief that the holiday lights are OK—or that you don't live in Ann Arbor, groups like the International Dark-Sky Association are working to pass legislation to limit lighting worldwide.

Dangers of light pollution

Don't believe light pollution exists?

Take a moment to look up into the night's sky and start counting stars. The more artificial light from homes and businesses, the fewer bright stars you will be able to see. And for some, that's a big problem.

The nonpartisan International Dark-Sky Association, based in Tucson, Arizona, says light pollution is any adverse effect or impact attributable to artificial light—directed, or used by humans for any purpose—at night.

That could include excessive lights directing Santa to your home.

And, of course, lights are what gives Paris its nickname as La Ville Lumière.

"We're not trying to keep Santa from finding anyone's roof at all," said Sally Oey, an astronomy professor at the University of Michigan who notes that tasteful holiday displays are decorative. "But there also are a lot of people who don't appreciate extremely bright light installations."

What's at stake with all this lighting?

Well, Oey, who also is a coordinator of Michigan Dark Skies, says stargazing for one thing. Researchers can't see the stars through bright lights. But more significantly, she added, light is destroying the nocturnal habitats of billions of birds and insects.

Oey calls it an insect apocalypse.

The International Dark-Sky Association has been fighting light pollution since 1988 and claims it has "made significant strides," reaching reaches 51 countries, with members and advocates in North America, Latin America, Europe, Africa, and Asia.

At the same time, it acknowledges the problem is growing, too.

Light pollution, the association says, is "increasing worldwide at twice the rate of global population growth." In other words, 8 out of 10 people live under a light-polluted night sky and in the U.S. alone, $3 billion dollars is spent annually on outdoor lighting.

Research, the association says, suggests that artificial light at night may even harm human health, increasing risks for obesity, depression, sleep disorders, diabetes, breast cancer, and more.

The group is working to promote light-limiting legislation and to "encourage communities, parks and protected areas around the world to preserve and protect dark sites through responsible lighting policies and public education."

Controversy in Detroit

Still, in addition to too much lighting, not enough also has been an issue.

Officials have said inadequate lighting invites crime and makes some

feel unsafe.

Yet, last year, the Savvy Sleeper—an online group that writes about and promotes sleep products—concluded that Detroit's lousy light pollution ranking was keeping the city's residents up at night, literally.

In a raking of the 50 cities with the most light pollution based on government data, Detroit was No. 2, just after Washington DC, and ahead of Reno, Nevada; Anchorage, Alaska; Minneapolis, Minnesota, and Atlanta.

Detroit also had the highest percentage of residents getting fewer than seven hours of sleep each night.

Was there a connection between these two things? The Savvy Sleeper thought so.

"The data makes it quite clear that additional light beyond normal daylight hours does more than prevent us from seeing our starry skies," a Savvy Sleeper editor said. "It prevents us from achieving optimal sleep."

And three years before the Savvy Sleeper report, the Detroit Lions made headlines, not for winning games, but because they were lighting up Ford Field's roof. Some area residents weren't exactly glowing about it.

They even started an online petition to stop it.

The Free Press also reported a study at the time from the American Medical Association Council on Science and Public Health found that blue LED light "has serious implications for nighttime driving visibility."

The light, the study found, can impact birds and insects that fly at night.

And the city, it turned out, has a zoning ordinance that says: "All reasonable measures shall be taken to ensure that the off-site spillover of light and night glow are minimized to the greatest extent possible."

The Lions said it followed municipal protocols when acquiring permits and are in compliance with ordinances, and received "positive feedback" from law enforcement. More light made for "a more vibrant" downtown Detroit atmosphere.

But, on Monday, the team added, it also listened to residents and turned down the lights a bit, which seemed to satisfy them. The lights are still on, and can shine in different colors for various causes and holidays.

They just don't shine quite as intensely.

It's hard to imagine the Detroit skyline without the Ford Field lights. And it makes the city appear more festive during the holidays. But anti-light pollution advocates warn, you also don't want the lights so bright that the Wise Men can't see the Star of Bethlehem.

©2021 freep.com
Distributed by Tribune Content Agency, LLC.

Citation: Light pollution is one more thing to consider when hanging those colorful holiday strands (2021, November 29) retrieved 23 April 2024 from
https://phys.org/news/2021-11-pollution-holiday-strands.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.