

Pelham's New DarkSky Bylaw and You

Stacey Y. McCullough, Planning Board member, on behalf of the Planning Board

What is DarkSky?

Internationally, state-wide, and locally, DarkSky standards aim to protect wildlife and human health by reducing light pollution, while still ensuring that you have the light you need. At spring Town Meeting, Pelham voted in a new DarkSky bylaw. It's based on lighting standards developed by the prominent organization DarkSky International.

Why DarkSky?

Excess light disorients migrating hummingbirds and butterflies, discourages fireflies, and makes frogs too vulnerable to predators. That's just for starters. Excess light harms many of the insects, amphibians, birds, and mammals that live with us in Pelham. That includes humans, with higher rates of cancer, heart disease, diabetes, depression, obesity, and sleep disorders where there's more artificial light.¹ Excess light wastes energy and money. Glare can create the illusion of visibility while actually making it harder to see – especially for aging eyes. Plus it spoils stargazing, and could even annoy your neighbors! That's why more than 50 Massachusetts municipalities have already enacted DarkSky-related legislation.²

Will I still have enough light?

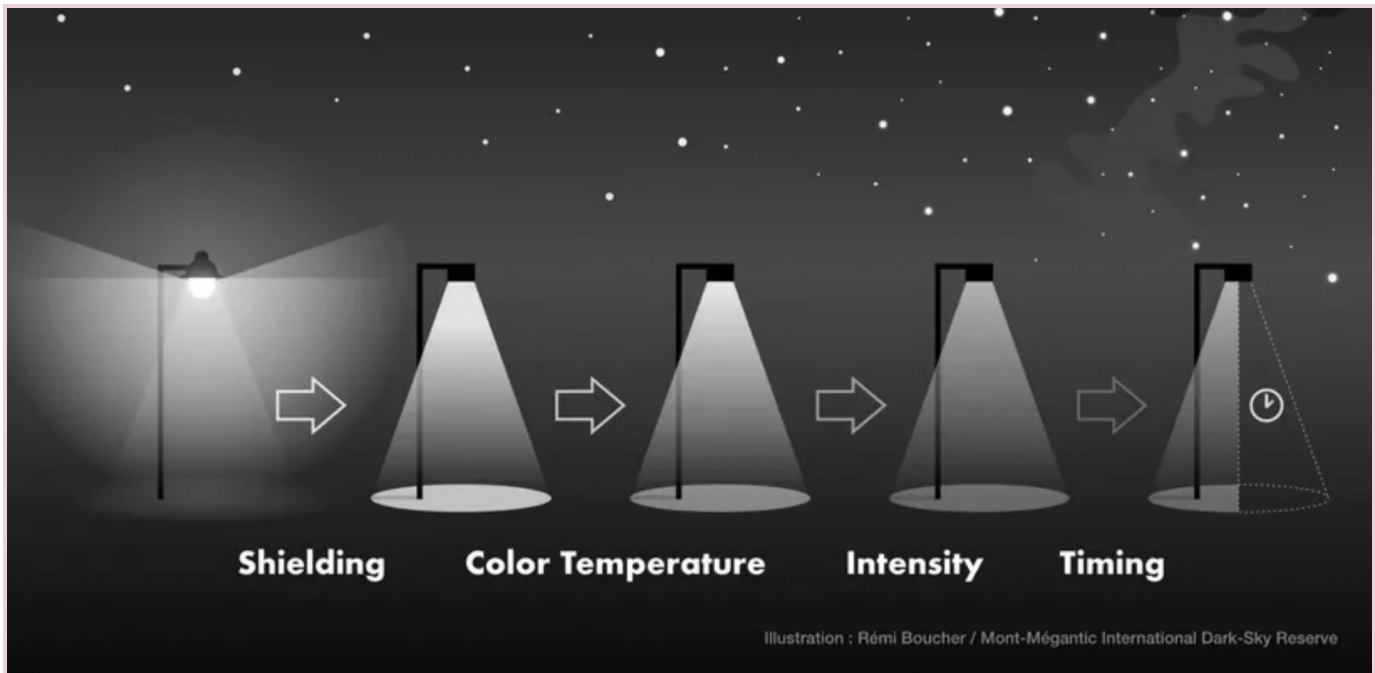
Seeing your way around is important! DarkSky standards are compatible with keeping your property securely and safely lit. DarkSky's first statement about "[r]esponsible outdoor lighting" is that it "[m]eets the needs of people to see at night."³ DarkSky standards were no off-the-cuff project. Rather, they draw on reams of published studies, and address the visibility needs of diverse populations, including the elderly and those with low vision. Local college campuses, residential developments, and homes have been lit effectively according to these standards. You can see photos of a few of these locations at the link noted below.

It can be a real shift to go from lighting up a property like a stadium to a softer glow. But doing so can actually improve functional visibility by keeping glare from washing out your vision. In terms of security, decades of studies find no conclusive link between lighting and crime.⁴ The standards ensure that light is on your path when and where you need it, not constantly spilling out or up into the sky. The warmer light tones are just as illuminating, but have less of a negative impact. If you can imagine walking under the full moon, compliant lighting is up to 300 times as bright, depending on the square footage that each fixture covers.⁵

Many people wonder about the cost of DarkSky compliant lighting. When it's time for replacement or new lighting, good lights are no more expensive than bad ones – and, they'll actually save you money by minimizing wasted energy.

What's in the bylaw and what can I do?

Because of the importance of DarkSky's goals, recently affirmed in a town-wide survey, we were eager to get a bylaw on the books. Until consumer labeling for bulbs and fixtures catches up, some of the bylaw's technical specifications will be more relevant for professionally-led construction projects, and we do anticipate bylaw refinements over time. But the bylaw's principles, with their many immediate benefits, are already actionable. This illustration summarizes those principles in terms of the steps that improve lighting:



Shielding: Keep light from shining upwards. Direct light where you need it, and limit spillover in other directions.

Color Temperature: Choose amber-toned lighting rated 2700K or less. *(Color version of illustration is at link below.)*

Intensity: Think soft glow, not glare.

Timing: Use timers or sensors so light is on when you need it, and off when you don't.

You can find the complete bylaw on the town website's Planning Board page. There too, you can see photos of the example sites mentioned above, the color version of the accompanying illustration, and links to more information about DarkSky in general. Visit <https://www.townofpelham.org/planning-board>, and look for the green DarkSky tab on the left.

Is the choice to support DarkSky up to me?

While we hope you'll want to support DarkSky standards, there's no light police coming to your door to check your pre-existing lighting. When there's new construction, and when you're replacing bulbs and fixtures over time, that's when it's critical to be cognizant of the bylaw. The building inspector can help with implementation questions. There are handouts at the library, and the planning board together with others will be looking into providing a community forum with an expert or other forms of assistance – watch the town website for updates.

¹<https://darksky.org/resources/what-is-light-pollution/effects/human-health/>

²<https://idamass.wordpress.com/best-practices/massachusetts-towns-with-outdoor-lighting-ordinances/>

³<https://darksky.org/what-we-do/advancing-responsible-outdoor-lighting/>

⁴<https://darksky.org/resources/what-is-light-pollution/effects/safety/>

⁵James Lowenthal, DarkSky Mass president