



P.O. Box 278  
Riverdale, MD 20738

**Committee** Education, Energy, and the Environment  
**Testimony on:** SB405 “Outdoor Lighting - Standards and Use of State Funds”  
**Position** Favorable  
**Hearing Date:** February 20, 2024

The Maryland Chapter of the Sierra Club urges a favorable report on SB405. The bill expands the scope of a 2011 law requiring state-funded outdoor lighting fixtures that maximize energy conservation and minimize light pollution at state buildings and state facilities. It expands the existing provisions to state-funded outdoor lighting at parks, trails, and highways.

The bill also limits the color temperature of state-funded outdoor lighting to 3,000 Kelvin, consistent with 2016 American Medical Association (AMA) guidance.<sup>1</sup> 3,000K is considered “warm white” and is less disruptive to the health and behaviors of nocturnal wildlife, including fireflies, and night pollinators. A study by Hood College in Frederick County found that fireflies drastically reduced their light-blinking behavior when exposed to just one tenth the light of a streetlamp using cooler colors, threatening their ability to mate, control mosquitoes, and pollinate flowers.<sup>2</sup> The Bethany Beach Firefly is now rated “highly state rare” by the Department of Natural Resources and is found only in Wicomico County, partly due to light pollution.<sup>3</sup> The bill also requires the Department of the Environment (MDE), in consultation with other agencies, to develop outdoor lighting standards that consider energy consumption, the environment, and public health and safety.

The benefit of this legislation is that it expands efforts to address the harmful effects of artificial lighting at night. As discussed in a January 2023 article in the journal *Science*,<sup>4</sup> excessive artificial lighting at night can have a detrimental impact on the welfare of animals and humans alike.

For over two decades, our state has recognized the need to address light pollution. In 2001, former Treasurer Nancy Kopp championed a joint resolution to establish the Task Force to Study Lighting Efficiency and Light Pollution in Maryland which issued an important report in 2002.<sup>5</sup> Chapter 353 of 2011 established the current policy of requiring efficient/shielded fixtures for new/replacement outdoor lighting at state buildings and state facilities. In 2014 the Maryland Department of General Services and the Green Purchasing Committee (established by Chapter 594 of 2010) published specifications for the purchase of environmentally friendly

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<sup>1</sup> 2016 “[American Medical Association adopts guidance to reduce harm from high intensity street lights.](https://www.ama-assn.org/press-center/press-releases/ama-adopts-guidance-reduce-harm-high-intensity-street-lights)”  
<https://www.ama-assn.org/press-center/press-releases/ama-adopts-guidance-reduce-harm-high-intensity-street-lights>

<sup>2</sup> Costin, K.J., and Boulton, A.M., “A Field Experiment on the Effect of Introduced Light Pollution on Fireflies (Coleoptera: Lampyridae) in the Piedmont Region of Maryland,” *The Coleopterists Bulletin*, vol. 70, no.1, (2016), <http://www.bioone.org/doi/10.1649/072.070.0110>.

<sup>3</sup> *Ocean City Today*, 7-14-2023, Where are all of Maryland's fireflies? | Lifestyle | oceancitytoday.com

<sup>4</sup> *Science*, January 19, 2023, vol. 379, no. 6629, “Light Pollution is Skyrocketing.”  
<https://www.science.org/doi/10.1126/science.adf4952>

<sup>5</sup> March 2002 Report of the Task Force to Study Lighting Efficiency & Light Pollution in Maryland,  
<https://msa.maryland.gov/megafile/msa/speccol/sc5300/sc5339/000113/000000/000008/unrestricted/20030006e.pdf>

lighting.<sup>6,7</sup>

By regulating outdoor lighting to modern scientific environmental, safety and efficiency standards, SB405 helps our state government to continue to lead by example in efforts to address harms caused by light pollution.

For these reasons, we urge a favorable report on SB405.

The committee may wish to consider an amendment that would (1) direct the Maryland Green Building Council or the Maryland Green Purchasing Committee to update its current standards after reviewing the latest information on light pollution and on color temperature (such as the AMA's 2016 guidance) and (2) delete the language requiring MDE to develop related standards. This approach is likely to be less costly than developing this expertise at MDE and could implement proven solutions efficiently and prudently.

Judith Fulton  
Maryland Sierra Club  
jfulton5@gmail.com

Josh Tulkin  
Chapter Director  
Josh.Tulkin@MDSierra.org

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<sup>6</sup> Maryland Green Purchasing Committee Approved Specification – Lighting Products  
<https://dgs.maryland.gov/Documents/GreenPurchasing/Specs/LightingProductsSpecification.pdf>

<sup>7</sup> Maryland Department of General Services lighting resource page on Green Purchasing  
<https://dgs.maryland.gov/Pages/GreenPurchasing/Resources/Lighting.aspx>