

Committee: Education, Energy, and the Environment
Testimony on: House Bill 452 Outdoor Lighting – Guidance and Use of State Funds
Position: Favorable
Hearing Date: 25 March 2025

Dear Chair Feldman, Vice-Chair Kagan, and Members of the Committee:

My name is Richard Joyce, and I write on behalf of the Xerces Society for Invertebrate Conservation to express **support for House Bill 452, Outdoor Lighting—Guidance and Use of State Funds**.

The Xerces Society is a science-based non-profit that protects wildlife through the conservation of invertebrates and their habitats. Insects are crucial parts of healthy ecosystems, with important roles in pollination, nutrient cycling, natural pest control, and the food chain. Light pollution has historically been overlooked as a driver of declines in insect populations, but a growing body of research tells us that the rapid increase of artificial light at night is a cause for concern and action.¹

Maryland has over 30 species of fireflies, including five that are categorized as critically endangered, endangered, or vulnerable on the International Union for Conservation of Nature’s (IUCN) Red List of Threatened Species². Xerces Society biologists have conducted research on several of these species in Wicomico and Worcester counties. One species, the Bethany Beach firefly, was proposed for listing as Threatened under the Endangered Species Act by the US Fish and Wildlife Service in 2024, and light pollution was identified as one of its threats³. As nocturnal animals whose reproduction depends on dark nights, fireflies are emblematic of the many insects we stand to lose if we fail to address light pollution.

The advent of LED lighting has been a boon for energy efficiency, but it has also allowed for the proliferation of outdoor lighting that does not comply with the International Dark Sky Association’s five criteria for responsible outdoor lighting: useful, targeted, low-

¹ Owens, A. C. S., Cochard, P., Durrant, J., Farnworth, B., Perkin, E. K., & Seymoure, B. (2020). Light pollution is a driver of insect declines. *Biological Conservation*, 241, 108259.
<https://doi.org/10.1016/j.biocon.2019.108259>

² Fallon, C., Walker, A., Lewis, S., & Jepsen, S. (2022). *State of the Fireflies of the United States and Canada: Distributions, Threats, and Conservation Recommendations* (p. 64). The Xerces Society for Invertebrate Conservation. https://xerces.org/sites/default/files/publications/21-021_02_web-print.pdf

³ “Endangered and Threatened Wildlife and Plants; Threatened Species Status with Section 4(d) Rule for Bethany Beach Firefly” 89 Fed. Reg. 79857-79880 (proposed 1 Oct. 2024).
<https://www.govinfo.gov/content/pkg/FR-2024-10-01/pdf/2024-22358.pdf#page=1>

level, controlled, and warm-colored. Too often, outdoor lighting installed with good intentions leads to the degradation of valuable wildlife habitat. **The inclusion of parks and trails in the scope of HB 452 will help to curtail light pollution in the state's natural areas.**

Thankfully, light pollution is a problem that can be rapidly reversed, with benefits to wildlife and humans alike. By requiring the Maryland Green Building Council to develop updated guidance on outdoor lighting fixtures and ensuring that state-funded outdoor lighting complies with this guidance, we can provide safe and responsible outdoor lighting while minimizing harms to insects and other wildlife.

The Xerces Society for Invertebrate Conservation urges a favorable report on HB 452.

Respectfully submitted,



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