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Committee: Senate Education, Health and Environmental Affairs
Legislation: SB 0268
Position: SUPPORT
Date: February 2, 2022

Dear Chairman Pinsky, Vice Chair Kagan, and Members of the Committee:

Waterkeepers Chesapeake supports SB 0268, which will transfer pesticide regulation from Maryland Department of Agriculture (MDA) to the Department of Environment (MDE) and urges a favorable report from the committee. Waterkeepers Chesapeake is a coalition of seventeen independent, non-profit Waterkeeper organizations, united behind a vision of clean water for all Chesapeake and coastal bay communities. We believe that the Department of Environment's mission to protect the State's environment makes it better suited to regulate toxic pesticides than the Department of Agriculture for the following reasons:

The EPA Chesapeake Bay Program reports 82% of the Chesapeake Bay's tidal waters are partially or fully impaired by chemical contaminants.[1] The Program notes that from the insecticides put on farm fields to the cleaners we use to disinfect our homes, contaminants enter the Bay and its tributaries and harm the health of both humans and wildlife. The Bay program further notes that the contamination of our waters by toxic pollution has worsened since 2010.[2] This decline must not continue.

The Maryland Department of the Environment is most qualified to handle regulation of hazardous substances. We believe MDE should regulate pesticides in the state because its mission "To protect and restore the environment for the health and well-being of all Marylanders" is properly focused on protecting health and the environment. Additionally, MDE already regulates hazardous waste, toxic air pollution, reviews toxic materials permit applications, and monitors toxic water pollution. Thus, MDE has the expertise and tools in place to regulate the toxic and hazardous chemicals classified as pesticides.

Existing MDE programs to protect human health and the environment:

- The Wetlands and Waterways Program is designed to protect and manage Maryland's tidal and nontidal wetlands and waters. Besides its regulatory functions, the Program purpose includes creating, restoring, and enhancing nontidal wetlands and streams; providing training and technical assistance to local jurisdictions and private organizations; and helps develop watershed management plans. Pesticides present imminent threats to these resources, and the division of regulatory authority over the threat from the resource threatened adds bureaucratic obstacles to prompt, effective protective action.
- The Environmental Risk and Assessment Program monitors shellfish and fish tissues for contaminants; and studies water quality. To evaluate and reduce whole effluent toxicity, the Program oversees tests at municipal and industrial facilities and develops and promulgates regulations to protect the quality of groundwater and surface water. By including pesticide oversight, this program could also include needed monitoring for pesticide contamination of the bounty of seafood from the Bay and protect human health.

[1] Toxic Contaminants Policy and Prevention. 2016. Chesapeake Progress. Retrieved January 28, 2022, from https://www.chesapeakeprogress.com/clean-water/toxic-contaminants-policy-and-prevention
[2] *Id.*

Protection of the environment and human health is not the Department of Agriculture's central mission. For example, **MDA's reporting of pesticide use in the State is woefully incomplete.** In 2014 the General Assembly provided annual dedicated funding for MDA to survey and report pesticide use. Since then, MDA has conducted only one survey, published in December 2016. The survey gathered data from just 7% of farmers and 15% of certified applicators in the State. A 7-15% confidence level for a study is a poor indication of statistical significance. Notwithstanding the doubtfulness of any overall conclusions that can be drawn from such a sample, the quantitative data the survey revealed are sobering. The 2016 survey reported 4.9 million pounds of pesticides were used by participating reporters. If the 7% of farmers is representative of all farmers in the State, farmer use alone could be in the realm of 70 million pounds of pesticides used in Maryland during the study period of 2014. TA better grasp on the usage of these chemicals is vital to understanding and addressing the effects pesticides have on Maryland's waterways and critical ecosystems.

Review of scientific literature on the Bay and pesticides from 2011 to 2021 reveal the following alarming trends:

- Application rates for dominant pesticides suggest that while total pesticide mass declined, the toxicity of pesticides has stayed the same or increased because the chemistry of pesticides are manufactured to be more toxic and the real load of pesticides entering the Bay is under-reported.[3]
- More understanding of toxicity levels and regulating the use of more toxic pesticides can reduce potential risks to human health and activity. [4] [5] [6]
- The presence of multiple contaminants in the watershed can increase the potential for pesticide synergism, when the toxicity or harmfulness of some (even less toxic) pesticides is increased through combination with other chemicals. [4] [7] [8] [9]
- The persistence of many toxic pesticides means that pesticide loads build up over time, ultimately exceeding EPA benchmarks. Monitoring this accumulation of historic and legacy pesticides is an important component of any approach to pesticide management. [4] [5] [8] [9] [10] [11]
- Studies on a range of species indicate that pesticides pose serious risks to physical development and the functioning of most physiological systems (including hormone, reproduction, immune, and nervous

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[3] Hartwell, S.I., 2011, Chesapeake Bay pesticide use declines but toxicity increases. Environmental Toxicology and Chemistry 30:1223-1231. https://doi.org/10.1002/etc.491

[4] Nieder, R., D.K. Benbi, and F. X. Reichl. 2018. Health risks associated with pesticide in soils. Soil Components and Human Health. Springer ebook 907 pp. https://doi.org/10.1007/978-94-024-1222-2

[5] Thanomsit, C., S. Saowakoon, A. Wattanakornsiri, J. Nanuam, W. Prasatkaew, P. Nanthanawat, P. Mongkolvai and W. Chalorcharoenying. 2020. Glyphosate (Roundup): Fate in aquatic environment, adverse effect and assessment in aquatic organisms. Naresuan University Journal: Science and Technology 28: 65-81 https://doi.org/10.14456/nujst.2020.7

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[8] Smalling, K.L., O.H. Devereux, S.E. Gordon, P.J. Phillips, V.S. Blazer, M.L. Hladlik, D.W. Kolpin, M.T. Meyer, A.J. Sperry and T. Wagner. 2021. Environmental and anthropogenic drivers of contaminants in agricultural watersheds with implications for land management. Science of the Total Environment 774:145687 https://doi.org/10.1016/scitotenv.2021.145687

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[11] Mahler, B.J., L.H. Nowell, M.W. Sandstrom, P.M. Bradley, K.M. Romanok, C.P. Konrad and P. C. Van Metre. 2021. Inclusion of pesticide transformation products is key to estimating pesticide exposures and effects in small U.S. streams. Environmental Science and Technology 55:4740-4752. http://doi.org/10.1021/aces.est.0c06625

systems). Monitoring the presence of tumors and other ill effects in animals can help us monitor overall water quality and better understand potential risks to human health and activity. [4 9 10 11 12 13 14 15 16 17 18]

- Pesticides are difficult to control, even when professionally applied. Risks can be mitigated through a variety of regulatory approaches. State legislators can take steps to ban or limit the most dangerous and persistent compounds. The negative impacts of other pesticides can be decreased through management tactics that emphasize controlled application, groundwater retention, and sediment management. Stormwater management is also an important tool in managing pesticides that is well documented but not yet practiced across the Chesapeake Bay watershed. [17 18 19 20]

Maryland would not be the first state to implement these measures. Other states that regulate pesticides through their environmental agencies include New Jersey, New York, Connecticut, Rhode Island, Vermont, Maine, South Carolina, Wyoming, Alaska, and California.

Waterkeepers Chesapeake urges the committee to provide a favorable report on SB0268 to ensure toxic pesticides are properly assessed for their unique impacts on our treasured Bay, its tributaries, and the communities that depend on them.

Sincerely,

Jesse L. Iliff

Board Chair, Waterkeepers Chesapeake

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