



Committee: Education, Energy, and the Environment

Testimony on: SB0158/HB0319 – Pesticide Registration - PFAS Testing - Requirements

Position: Favorable

Hearing Date: February 2, 2023

Chesapeake Physicians for Social Responsibility strongly supports Senate Bill 158

This bill would prohibit Secretary of Agriculture from permitting a mosquito controlling pesticide by January 1, 2024 unless the distributor demonstrates the product has passed certain tests attesting to it being below detectable levels of PFAS or fluorine content. It would prohibit the Secretary of Agriculture from permitting any pesticide beginning January 1, 2026 unless that product has been similarly found to have passed certain tests.

Chesapeake Physicians for Social Responsibility (CPSR) is a statewide evidence-based organization of over 940 physicians and other health professionals and supporters that addresses existential public health threats: nuclear weapons, the climate crisis, and the issues of pollution and toxic effects on health, as seen through the intersectional lens of environmental, racial and social justice.

PFAS is a manmade family of forever fluorinated chemicals called forever because the dense fluorine-carbon bonds are very strong and they are very slow to degrade and therefore bioaccumulate in humans, fish and our environment resulting in serious adverse health effects. Measurable levels of PFAS are in the blood of nearly all who live in the developed countries.¹ There are thousands of chemicals that are in this family making safety testing of each one impossible. In addition, international groups like the Organization for Economic Co-operation and Development (OECD) have a broader definition of PFAS encompassing many more chemicals than does the EPA. Related to this question of what is a pfas, a flood of new fluorinated pesticides has recently entered the market accounting for nearly 70% of the new agricultural related pesticides approved worldwide in the second half of the previous decade.²

Human exposure to PFASs occurs through ingestion of contaminated drinking water, fish, and other foods, air, inhalation of indoor air, and contact with other contaminated material.³ With

¹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7906952/>

² <https://doi.org/10.1016/j.envpol.2021.118315>

³ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6380916/>

long biological half-lives as well as environmental persistence, they are detected in the blood of nearly all in the developed world. It crosses the placenta and is present in breast milk.⁴ For toddlers and other children, intake is twice that of older groups, and in utero and breast feeding are major routes of their exposure.⁵

Scientists for the Public Employees Environmental Responsibility have found PFAS in several mosquito control pesticide products it has tested.⁶ The EPA acknowledged that it found PFAS in some of the plastic containers used to store PFAS though PEER has found PFAS in some products that were stored in metal containers and raise the possibility that the chemicals are from the inert ingredients.⁷ A follow up study found that a sample of pesticides had levels of PFAS that were too high to be due to container contamination but likely were PFAS chemicals that were part of the pesticide formulation.⁸ One of the pesticides containing PFAS is malathion, one of the most commonly applied insecticides in the world.”⁹

This matters because of serious adverse effects health effects of PFAS. The former director of the National Institute of Environmental Health Sciences and the National Toxicology Program has said that impaired immune response, kidney cancer and elevated cholesterol in children and adults are **caused** by PFAS chemicals, after decades of reviewing research on the subject.¹⁰ In a recent review, the authors concluded that high certainty PFAS health effects include: kidney cancer, testicular cancer, liver damage (associated with fatty liver), altered thyroid hormone levels, high cholesterol (increase serum total cholesterol and the fraction we usually associate with heart disease, in adults and children), low birth weight, reduced immune response including a reduced response to vaccines after exposures in utero.¹¹ A report by the National Academies of Science, Engineering and Medicine attested to the association between PFAS exposure and increased risk of altered immune response, decreased infant and fetal growth, high cholesterol and risk of kidney cancer.¹² A court ordered study, the C8 Health Study as part of a settlement against a Dupont plant that caused water contamination of over 70,000 residents, found a link between one major PFAS chemical and increased cholesterol, kidney cancer, testicular cancer, ulcerative colitis, thyroid disease, and pregnancy -induced

<https://www.atsdr.cdc.gov/pfas/health-effects/exposure.html#:~:text=Workers%20may%20be%20exposed%20to,your%20body%20through%20your%20skin>

⁴ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7906952/>

⁵ <https://efsa.onlinelibrary.wiley.com/doi/full/10.2903/j.efsa.2020.6223>

⁶ [https://www.bayjournal.com/news/pollution/forever-chemicals-found-in-mosquito-spray/article_f159caae-be44-11eb-a307-](https://www.bayjournal.com/news/pollution/forever-chemicals-found-in-mosquito-spray/article_f159caae-be44-11eb-a307-136f1e350242.html#:~:text=A%20pair%20of%20environmental%20groups,well%20as%20in%20other%20states)

[136f1e350242.html#:~:text=A%20pair%20of%20environmental%20groups,well%20as%20in%20other%20states](https://www.bayjournal.com/news/pollution/forever-chemicals-found-in-mosquito-spray/article_f159caae-be44-11eb-a307-136f1e350242.html#:~:text=A%20pair%20of%20environmental%20groups,well%20as%20in%20other%20states)

⁷ [https://www.maine.gov/dacf/php/pesticides/documents2/bd_mtgs/jul21/12b_CLF%20&%20PEER%20PFAS-in-Pesticides%20Letter%20\(ME\).pdf](https://www.maine.gov/dacf/php/pesticides/documents2/bd_mtgs/jul21/12b_CLF%20&%20PEER%20PFAS-in-Pesticides%20Letter%20(ME).pdf)

⁸ <https://peer.org/substantial-pfas-contamination-found-in-pesticides/> “

⁹ <https://www.scientificamerican.com/article/pesticides-are-spreading-toxic-forever-chemicals-scientists-warn/>

¹⁰ <https://theintercept.com/2019/10/24/pfas-toxicologist/>

¹¹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7906952/>

¹² <https://www.nationalacademies.org/news/2022/07/new-report-calls-for-expanded-pfas-testing-for-people-with-history-of-elevated-exposure-offers-advice-for-clinical-treatment>

hypertension.¹³ A Harvard School of Public Health study from Denmark linked more serious outcomes for COVID-19 with elevated blood PFAS levels for one of the less common PFAS chemicals known to accumulate in the lungs.¹⁴ In the midst of a pandemic, it is of great concern to raise the possibility of a link between PFAS chemical exposure and impaired immune response. This study underscores why we need to test for what links the group uniquely, the density of fluorine bounds with the carbon atom and testing for fluorine since there are thousands of PFAS chemicals and we cannot test for them all.

For all of these reasons, ***Chesapeake PSR strongly supports SB0158***, a bill to ensure all pesticides registered for sale and use in Maryland are tested by EPA or MDE by approved labs, paid for by the manufacturer as part of its annual registration. This will begin to ensure we are addressing the harmful ubiquitous, forever family of chemicals known as PFAS so that we no longer can continue to pollute our environment and harm children and adults with PFAS from pesticides. CPSR has always advocated on the principal that it is important to prevent what you cannot cure.

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¹³ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7530144/>

¹⁴ <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0244815>