



# BEYOND PESTICIDES

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## Statement in Support of HB 386

Health and Government Operations Committee  
Maryland House of Delegates  
February 10, 2025

Honorable Committee Chair Pena-Melnyk and Subcommittee Chair Cullison. We appreciate the opportunity to submit this statement in support of HB 386. Beyond Pesticides is a national, grassroots, membership organization that represents community-based organizations and a range of people seeking to improve protections from pesticides and promote alternative pest management strategies that reduce or eliminate a reliance on toxic pesticides. Our membership spans the 50 states, the District of Columbia, and groups around the world. We are providing this testimony on behalf of our members and supporters in Maryland.

As you consider the importance of this legislation, supported by scientific findings, we urge you to recognize the dire need to improve state of Maryland safeguards concerning the use of pesticide active ingredients composed of per- and polyfluorinated substances (PFAS), commonly referred to because of their persistence as “forever chemicals.” PFAS persistence is due to a fluorine–carbon atom bond being among the strongest ever created. PFAS contamination of drinking water, surface and groundwater, waterways, soils, and the food supply, among other resources, is a ubiquitous and concerning contaminant across the globe. HB 386, as of June 1, 2026, prohibits the use of pesticides with PFAS active ingredients for health care facilities, schools, day care operations, residential lawns, and commercial mosquito operations. As of June 1, 2027, no PFAS pesticides will be registered for sale in Maryland, and as of June 1, 2028, the use of any PFAS pesticide is prohibited throughout the state.

In supporting the elimination of PFAS pesticides, the National Biomonitoring Program of the U.S. Centers for Disease Control and Prevention (CDC) has found the following:

Since 1999, CDC scientists have measured at least 12 PFAS in blood serum (the clear portion of blood). Blood serum is obtained from participants, aged 12 years and older, who have taken part in the National Health and Nutrition Examination Survey (NHANES) (Fourth National Report on Human Exposure to Environmental Chemicals, Updated Tables).

Many PFAS, including perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA), are a concern because they:

- do not break down in the environment,
- can move through soils and contaminate drinking water sources,
- build up (bioaccumulate) in fish and wildlife.

PFAS are found in rivers and lakes and in many types of animals on land and in the water.<sup>1</sup>

These forever chemicals are linked to health risks including developmental and endocrine system disruption, reproductive harm, cancer, damage to the liver, kidneys and respiratory system.<sup>2</sup> Gestational (during pregnancy) and childhood exposure to PFAS increases cardiometabolic risk, or the risk of heart diseases and metabolic disorders, later in life, according to a Brown University study published in *Environment International*.<sup>3</sup> PFAS present a chronic danger to Americans that demands immediate regulatory action.

The detection of any level of PFAS is cause for concern. As drinking water health advisories issued by the U.S. Environmental Protection Agency (EPA) show, PFAS levels as low as .02 parts per trillion (ppt) have the potential to cause adverse health effects for public health.<sup>4</sup> In *Ecotoxicology and Environmental Safety*, researchers find exposure to PFAS chemicals threatens health on a cellular level.<sup>5</sup> These chemicals, as endocrine disruptors, imitate the action of endocrine hormones and lead to gene damage and multigenerational adverse effects to health.

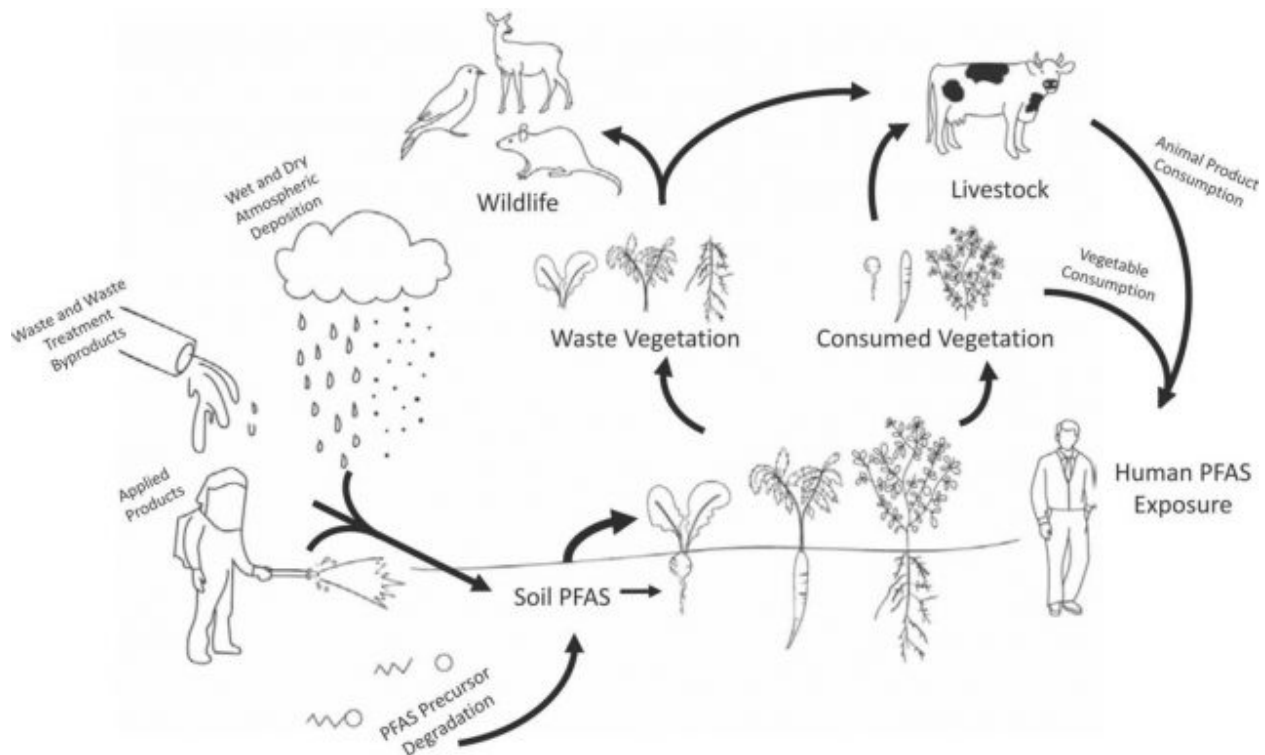
In summarizing these results, the researchers state, “As a class of particularly representative endocrine-disrupting chemicals, the accumulation of per- and polyfluoroalkyl substances potentially leads to adverse health effects, including hormonal disruptions, developmental issues, and cancer.”<sup>5</sup> These effects are as a result of complex mechanisms that are not yet fully understood or assessed in pesticide registration processes, which highlights how the immunotoxic effects of PFAS threaten human health and need to be addressed.

The classification of PFAS is also of concern, as the number of PFAS in the U.S. heavily depends on the EPA definition, which is currently done on a “case-by-case” basis during rulemakings and agency actions. Many experts describe EPA’s initial definition as significantly underinclusive compared to state and international definitions that encompass a wider range of compounds. The broad definition of PFAS as a compound with at least “one fully fluorinated carbon” has been adopted by many states and other authorities, such as the U.S. Geological Survey (USGS) and the Toxics Release Inventory (TRI) under Section 313 of the Superfund Law, or Emergency Planning and Community Right-to-Know Act (EPCRA). This definition, included in HB 386, is better suited to evaluate pesticide products containing PFAS.

The use and associated public and environmental exposure to PFAS as pesticide active ingredients in over 1,000 products registered in Maryland represents a grave threat as a result of their use in residential areas, emergency rooms, health care facilities, schools, and commercial lawn care. The contamination extends to our homes and gardens, food, water, and soil. PFAS compounds have been found to contaminate water and irrigation sources and soils themselves — often through the use of fertilizers made from so-called “biosludge” (biosolids) from local waste treatment plants where PFAS active ingredients can end up.

In addition, run-off from land treated with pesticides containing PFAS active ingredients adds to the contamination. Treatment plants may discharge millions of gallons of wastewater into waterways. As current waste and water treatment generally does not eliminate PFAS compounds from the treated effluent water, this distributes PFAS throughout the waterways. PFAS contamination of Maryland waterways threatens not only the health and safety of those who participate in recreational fishing but also the \$600 million dollar seafood industry.

In addition to remaining in the environment because of its persistence, according to research published in the *Journal of Hazardous Materials Letters*,<sup>6</sup> a significant portion is likely to be taken up by crops grown where PFAS insecticides are applied. According to the researchers, “Future use of soils treated with PFAS contaminated pesticides for other crops or pesticide drift could lead to PFAS concentrations being found in crops used for human or animal consumption.”



The Agency for Toxic Substances Disease Registry (ATSDR) notes: “[B]ecause of their widespread use and their persistence in the environment, many PFAS are found in the blood of people and animals all over the world and are present at low levels in a variety of food products and in the environment. PFAS are found in water, air, fish, and soil at locations across the nation and the globe. Scientific studies have shown that exposure to some PFAS in the environment may be linked to harmful health effects in humans and animals.”<sup>7</sup> However, the federal regulatory agency, EPA, has not acted on the widespread exposure caused by pesticides with PFAS active ingredients.

PFAS are already in our drinking water—in the Chesapeake Bay and in our soil, food, and bodies. Because of this, Maryland has issued fish advisories for PFAS in parts of the state. Every exposure adds to the impact on our bodies and increases the cumulative body burden of harmful chemicals. It only makes sense to take this simple step to stop this unnecessary PFAS contamination source in pesticides. Moreover, HB 386 impacts approximately 8% of pesticides sold in Maryland. The legislation will not cause hardship, since plenty of natural alternative products and practices are available. In adopting HB 386, Maryland will be joining Maine and Minnesota, states that have already passed laws preventing pesticides containing these forever chemicals from being sold. This bill is a reasonable and important step towards protecting the health and welfare of Maryland residents and the environment—from crops to fish and wildlife.

### **Alternatives to Pesticides with PFAS Active Ingredients**

Eliminating pesticides with PFAS active ingredients will not cause disruptions to the pest management or pest service industry. Pest problems in agriculture and landscaped areas can be prevented through practices that improve soil health and promote biodiversity and habitat for pest predators. If pest problems do become an issue, a wide range of insecticidal soaps and essential oils, classified either as certified organic, or minimum risk, are available and represent a least-toxic option.

We respectfully urge passage of HB 386 in the context of eliminating severely damaging pesticides that can be replaced by practices and materials compatible with the environment and public safety.

Thank you for the opportunity to comment.

Jay Feldman, Executive Director  
Sara Grantham, Science, Regulatory, and Advocacy Manager  
Beyond Pesticides

## Endnotes

- [<sup>1</sup>] National Biomonitoring Program, U.S. Centers for Disease Control and Prevention, Per- and Polyfluorinated Substances (PFAS) Factsheet, [https://www.cdc.gov/biomonitoring/PFAS\\_FactSheet.html](https://www.cdc.gov/biomonitoring/PFAS_FactSheet.html).
- [<sup>2</sup>] Agency for Toxic Substances Disease Registry (ATSDR), Toxicological Profile for Perfluoroalkyls, May 2021, <https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf>.
- [<sup>3</sup>] Nan Li, Yun Liu, George D. Papandonatos, Antonia M. Calafat, Charles B. Eaton, Karl T. Kelsey, Kim M. Cecil, Heidi J. Kalkwarf, Kimberly Yolton, Bruce P. Lanphear, Aimin Chen, Joseph M. Braun, Gestational and childhood exposure to per- and polyfluoroalkyl substances and cardiometabolic risk at age 12 years, *Environment International*, Volume 147, 2021, 106344, ISSN 0160-4120, <https://doi.org/10.1016/j.envint.2020.106344>.
- [<sup>4</sup>] Drinking Water Health Advisories (HAs), U.S. Environmental Protection Agency. Available at: <https://www.epa.gov/sdwa/drinking-water-health-advisories-has>.
- [<sup>5</sup>] Liu, Y. et al. (2025) The potential endocrine-disrupting of fluorinated pesticides and molecular mechanism of EDPs in cell models, *Ecotoxicology and Environmental Safety*. Available at: <https://www.sciencedirect.com/science/article/pii/S0147651324016919>.
- [<sup>6</sup>] Steven Lasee, Kaylin McDermett, Naveen Kumar, Jennifer Guelfo, Paxton Payton, Zhao Yang, Todd A. Anderson, Targeted analysis and Total Oxidizable Precursor assay of several insecticides for PFAS, *Journal of Hazardous Materials Letters*, Volume 3, <https://doi.org/10.1016/j.hazl.2022.100067>.
- [<sup>7</sup>] ATSDR, What Are PFAS?, <https://www.atsdr.cdc.gov/pfas/health-effects/overview.html#:~:text=Because%20of%20their%20widespread%20use,with%20repeated%20exposure%20over%20time>.