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**Public Comments on Proposal for Safe Drinking Water PFAS MCL Rule
Submitted to the PA Environmental Quality Board (EQB)
By the Environmental Health Project**

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Members of the PA Environmental Quality Board:

The Environmental Health Project (EHP) is a data-driven public health organization headquartered in McMurray, Pennsylvania, just south of Pittsburgh. We are a skilled group of public health professionals, community educators, and data analysts who have become national leaders in the comprehensive understanding of public health consequences of shale gas development (SGD) and, in the process, have gained a working knowledge of general environmental impacts from SGD, such as contaminated water. EHP has a decade of community science experience, working directly with frontline residents concerned about how their health has been, or may be, impacted by SGD.

We are submitting this written comment to the Environmental Quality Board (EQB) to extend our verbal comments and to express our unequivocal support for the creation of drinking water standards regarding PFOS (18 ppt) and PFOA (14 ppt), both of which can jeopardize the health of many Pennsylvanians. The EPA currently references a health advisory limit (HAL) for PFOS and PFOA of 70 ppt, however this is just an advisory standard and not a regulatory one.¹ EHP recognizes the EQB for recommending stricter regulations. The creation of standards for PFAS chemicals, as well as guidance for testing and treating contamination in drinking water sources, will better protect public health and save the lives of many impacted residents.

PFAS are a class of manmade chemicals that can contaminate soils, surface and groundwater, and drinking water sources. Because PFAS do not break down in the environment or in the human body, they can accumulate in animal and human tissues. Research has also proven that PFAS are highly toxic. According to the [Agency for Toxic Substances and Disease Registry \(ATSDR\)](#), exposure to PFAS may lead to health impacts, including liver damage, increased risk of high blood pressure or pre-eclampsia in pregnant individuals, decreased birth weights, and kidney and testicular cancer.

Researchers are increasingly highlighting the health impacts of PFAS contamination in water, nationwide. In Southwestern Pennsylvania, the McKeesport and Coraopolis communities have been found to have PFAS contamination due to known PFAS chemical use in those locations.

For example, in the 2020 study, *Endocrine disruption of vitamin D activity by perfluoro-octanoic acid (PFOA)*, Di Nisio et al. states, “Of the relatively few well-studied PFAS, most are considered moderately to highly toxic, particularly for children’s development. Perfluorooctanoic acid (PFOA) is the predominant form in human samples and has been shown to induce severe health consequences, such as neonatal mortality, neurotoxicity, and immunotoxicity.”²

Research indicates that oil and gas development uses and produces per- and polyfluoroalkyl substances (PFAS). In 2021, Physicians for Social Responsibility discovered evidence, through Environmental Protection Agency (EPA) documents, showing that PFAS or PFAS precursors (substances that could degrade into PFAS or perfluorooctanoic acid [PFOA]) have been used in oil and gas development, thereby creating risks for oil and gas workers and the public through multiple potential pathways of exposure.³

[The Oil and Gas Threat Map](#) shows that in Pennsylvania there are more than 1.5 million people living within a half-mile radius of 107,717 oil and gas facilities. These people represent about 12% of Pennsylvania’s population. Additionally in Pennsylvania, there are 310,896 students and 1,118 schools and day care facilities within that radius. The number of residents who live, work, and play near oil and gas facilities in Pennsylvania illustrates the magnitude of impact contaminated surface water or groundwater with PFAS can have on residents.

It is because of the highly toxic nature of the PFAS chemicals and the magnitude of associated health risks that EHP strongly supports the proposed EQB standards for regulating PFAS in drinking water within Pennsylvania. EHP also urges the EQB to continue to examine other PFAS chemicals, which similarly have been shown to cause negative health impacts. This could include chemicals such as perfluorobutyrate (PFBA) and perfluorohexanoic acid (PFHxA).

With over 6,000 chemical compounds in the PFAS family, the EQB should give further consideration to expediting the creation of additional regulations. The EQB should also consider the idea of regulating chemicals as a class as opposed to one by one. The field of toxicology tells us that the toxicity of a mix of chemicals can be

understood by adding the toxicity of all the components together (i.e., additivity). Additivity allows us to understand how the presence of multiple chemicals can interact in the environment as well as inside a person. Sometimes the toxicity of the mix of chemicals is antagonistic, meaning the toxicity combined is less than the sum of all the parts. However, there are also some cases where the toxicity can be synergistic, meaning the components combined make each other more toxic.⁴ It is important to look at the big picture of all the PFAS chemicals that need regulating because they do not exist in a vacuum and often are found in combination with others. Regulating these chemicals one at a time is not practical if protecting Pennsylvanians' health is the goal.

In addition to regulating PFAS chemicals as a class, the EQB should consider widening the scope of PFAS sampling. The PFAS Sampling Plan conducted by the states PFAS Action Team focused its sampling on military bases, fire training schools/sites, airports, landfills, manufacturing facilities, and state hazardous cleanup sites. While these are valid and important sites to monitor, new research regarding the use of PFAS in oil and gas development operations indicates a need for further sampling in residential areas. Additionally, as the extent of the use of PFAS in oil and gas development becomes better known, the desire by communities for PFAS testing of their water sources is also likely to increase. EHP urges the EQB to consider the state's response to residents who desire testing and what the protocol and process will be for responding to such requests. Further, the EQB needs to consider how remediation efforts will be addressed when contamination is confirmed, since this can be a costly endeavor for individuals and water companies alike.

EHP supports the adoption of Safe Drinking Water PFAS MCL Rule. EHP further urges the EQB to consider the extra steps identified above to protect the health of Pennsylvanians and ensure access to clean drinking water for all.

¹U.S. Environmental Protection Agency. (2022, February 10). *Drinking Water Health Advisories for PFOA and PFOS*. <https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos>

²Di Nisio, A., et al. (2020). Endocrine disruption of vitamin D activity by perfluoro-octanoic acid (PFOA). *Scientific Reports*, 10(1). <https://doi.org/10.1038/s41598-020-74026-8>

³Physicians for Social Responsibility-Colorado. (2022, February 26). *Oil and Gas Companies Withheld Fracking Chemical Identities from Public in More than 12,000 Colorado Wells over Past Decade; Interactive Map Shows Locations*. <https://www.psrcolorado.org/news/new-psr-report-fracking-with-forever-chemicals-in-colorado#:~:text=PSR's%20findings%20in%20Colorado%20build,that%20could%20degrade%20into%20PFAS>

⁴Canadian Centre for Occupational Health and Safety. (2019, January 23). *Synergism and related terms: OSH Answers*. <https://www.ccohs.ca/>. Retrieved March 18, 2022, from <https://www.ccohs.ca/oshanswers/chemicals/synergism.html>