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Independent Regulatory Review Commission

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Heather Hulton VanTassel, PhD
Executive Director, Three Rivers Waterkeeper
230 Montclair Avenue
Pittsburgh, PA 15229

APRIL 26, 2022

TO: PENNSYLVANIA ENVIRONMENTAL QUALITY BOARD
P.O. Box 8477
Harrisburg, PA 17105- 8477

Re: Proposed Rulemaking on Safe Drinking Water PFAS MCL Rule

We, Three Rivers Waterkeeper (3RWK), thank you for the opportunity to provide comments on the proposed rule, "Safe Drinking Water PFAS MCL Rule" (the proposed rule), published in *Pennsylvania Bulletin Vol. 52 Issue 9* on Saturday, February 26, 2022. 3RWK was founded in 2009 and aims to improve and protect the water quality of the Allegheny, Monongahela, and Ohio Rivers. These waterways are critical to the health, vitality, and economic prosperity of our region and communities. We are both a scientific and legal advocate for the community, working to ensure that our three rivers are protected and that our waters are safe to drink, fish, swim, and enjoy. We are one of the 300 organizations that make up the global Waterkeeper Alliance and work together to connect local communities to global environmental

and advocacy resources. Due to this and our significant experience and knowledge as stewards and advocates for the Three Rivers, we believe that we can provide the Pennsylvania Environmental Quality Board with valuable insight on the proposed rulemaking.

Over five million people rely on the Ohio River for their drinking water, and it sends more water into the Mississippi than any other tributary.[1] The Allegheny and Monongahela Rivers serve as the headwaters for the Ohio River Basin, and along its course, the Ohio River passes steel factories, farms, and power plants and creates the borders between Ohio and West Virginia, Ohio and Kentucky, Indiana and Kentucky, and Illinois and Kentucky.[2] This means that a contaminant that enters the water in Pennsylvania could wind up in Kentucky, Indiana, and beyond.[3] Because of this, it is vital to carefully monitor and control any contaminants that are added to the water. Furthermore, the Ohio River Basin is just one of **six major watersheds** in Pennsylvania (major watersheds include the Ohio, the Genesee, the Susquehanna, the Delaware, the Erie, and the Potomac). Thus, it is critically important for the health and safety of Pennsylvanians and our neighboring states to set water quality standards that protect our drinking water sources.

PFAS compounds are used in many consumer, commercial, and industrial products.[4] PFOA and PFOS are highly toxic in tiny doses, build up in the human body, are difficult to excrete, and are linked to serious adverse health conditions, including cancers.[5] Current

[1] National Resources Defense Council, *The Ohio River Defines the Borders of Five States—But Its Pollution Doesn't Stop at State Lines* (Aug. 21, 2019), https://www.nrdc.org/stories/ohio-river-defines-borders-five-states-its-pollution-doesnt-stop-state-lines#:~:text=Five%20million%20people%20rely%20on,most%20polluted%20in%20the%20country.
[2] *Id.*
[3] *Id.*
[4] *Our Current Understanding of the Human Health and Environmental Risks of PFAS*, US EPA (accessed April 6, 2022) https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas.
[5] *Id.*

peer-reviewed scientific studies have shown that exposure to certain levels of PFAS may lead to:

- Reproductive effects, such as decreased fertility or increased high blood pressure in pregnant women.
- Developmental effects or delays in children, including low birth weight, accelerated puberty, bone variations, or behavioral changes.
- Increased risk of some cancers, including prostate, kidney, and testicular cancers.
- Reduced ability of the body's immune system to fight infections, including reduced vaccine response.
- Interference with the body's natural hormones.
- Increased cholesterol levels and/or risk of obesity.[6]

National surveys show that most people tested have some PFAS in their blood.[7] Because of the health risks associated with PFAS, it is crucial that PFAS levels in water are minimized.

We appreciate the Department's efforts to protect our right to clean water by proposing MCLs for two PFAS compounds. However, we are concerned that the proposed standards for PFOA and PFOS are not strict enough to protect public health. We are similarly concerned that the proposed standards do not include other PFAS compounds, including PFNA, PFHxA, PFHxS, PFHpA, and PFBS as these compounds pose multiple serious health risks, the extent of which are not yet fully known, the Department should further require immediate sampling with no monitoring delay. Sampling should also be required annually. Finally, the proposed rulemaking should ensure equal protection for all and include all water supplies, including private wells. We have outlined these topics below.

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[6] *Id.*

[7] National Institute of Environmental Health Sciences, *Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS),* (accessed April 8, 2022) https://www.niehs.nih.gov/health/topics/agents/pfc/index.cfm#:~:text=One%20report%20by%20the%20Centers,blood%20of%2097%25%20of%20Americans.

I. The proposed MCL standards for PFOA and PFOS are not strict enough to protect public health, and the Department should implement more protective standards.

The Department states that the proposed amendments are intended to protect public health, as safe drinking water is "vital to maintaining healthy and sustainable communities." However, the Department's proposed MCL standards of 14 ppt for PFOA and 18 ppt for PFOS are not strict enough to protect public health. Three Rivers Waterkeeper recommends that the standards of PFOA MCL should not exceed 6 ppt, and the PFOS MCL should be no greater than 5 ppt. When PFOA and PFOS are found combined in water, their combined concentration should be no higher than 11 ng/L based on the research conducted by Cambridge Environmental Consulting for the Delaware River Network.[8]

Other states have implemented stricter standards than the proposed ruling, exemplifying that it is feasible and necessary to implement more stringent standards. California, Colorado, Connecticut, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, North Carolina and Vermont have all adopted MCLs for PFAS compounds.[9] New Jersey has adopted MCLs of 14 ng/L for PFOA and 13 ng/L for PFOS,[10] and New Jersey residents have already sought to enforce different PFAS MCLs.[11] Washington state has set State Action Levels of 10

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[8] *Proposed Health-Based Maximum Contaminant Level (MCL) for Perfluorooctanoic Acid (PFOA) in Drinking Water. (Accessed April 14, 2022).* *(*https://www.delawareriverkeeper.org/sites/default/files/cvr%20ltr%20PFOA%20mcl%20cmnt11.19.combinedpdf_0.pdf.

[9] *Per- and Polyfluoroalkyl Substances (PFAS): State Legislation and Federal Action*, National Conference of State Legislatures (Jan. 25, 2021), https://www.ncsl.org/research/environment-and-natural-resources/per-and-polyfluoroalkyl-substances-pfas-state-laws.aspx#:~:text=States%20that%20have%20adopted%20or,in%20public%20drinking%20water%20systems.

[10] *Per- and Polyfluoroalkyl Substances (PFAS),* New Jersey Department of Environmental Protection (accessed March 29, 2022), https://www.nj.gov/dep/dsr/pfas.htm.

[11] *See Severa v. Solvay Specialty Polymers*, 524 F. Supp. 3d 381 (D.N.J. 2021) (denying a motion to dismiss a suit brought by residents against a company exceeding New Jersey's PFNA MCLs).

ng/L for PFOA and 15 ng/L for PFOS.[12] Vermont adopted an MCL of 20 ppt for five PFAS, including PFOA, PFOS, PFHxS, PFHpA, and PFNA.[13] The sum of these five PFAS cannot exceed 20 ppt.[14] Outside of the United States, Ontario, Canada established that PFAS in drinking should be addressed if the combined level of 11 different PFAS is collectively above 70 ng/L.[15] These actions show that it is possible and necessary for the Department to develop more stringent MCLs for both PFOA and PFOS.

The Department compares the proposed PFOA and PFOS MCLs to six other states: New York, Michigan, New Jersey, New Hampshire, Massachusetts, and Vermont. Of the states compared, the proposed MCLs for Pennsylvania are the highest both individually and cumulatively. The MCLs for Massachusetts and Vermont are the combined allowance for all PFAS.[16] The combined total of the proposed MCLs (14 ng/L for PFOA and 18 ng/L for PFOS) is 12 ng/L higher than the allowance of all PFAS in Massachusetts and Vermont, including PFOA, PFOS, PFHxS, PFHpA, and PFNA.[17] The cumulative proposed MCLs are 5 ng/L higher than the next highest state. As a result, Pennsylvanians will be subjected to higher PFAS MCLs than the residents of nearby states.

PFAS are linked to multiple health effects, including but not limited to developmental

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[12] *PFAS,* Washington State Department of Health (accessed April 4, 2022), https://doh.wa.gov/community-and-environment/contaminants/pfas.
[13] *Per and Polyfluoroalkyl Substances (PFAS) & Drinking Water*, Vermont Department of Environmental Conservation (accessed March 27, 2022), https://dec.vermont.gov/water/drinking-water/water-quality-monitoring/pfas.
[14] *Id.*
[15] *Minister's Annual Report on Drinking Water (2021)*, Ontario Government (accessed March 27, 2022), https://www.ontario.ca/page/ministers-annual-report-drinking-water-2021.
[16] *See Per and Polyfluoroalkyl*, *supra* note 13; *Per- and Polyfluoroaklyl Substances (PFAS),* Massachusetts Department of Environmental Protection (accessed March 27, 2022), https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas#:~:text=On%20October%202%2C%202020%2C%20MassDEP,concentrations%20of%20six%20specific%20PFAS.
[17] *Id.*

effects, liver toxicity, decreased immune response, thyroid disease, kidney disease, and cancers.[18] The CDC has estimated that the amount of PFOA an individual can eat, drink, or breathe each day without a detectable risk to health is only 3 ng/L per day.[19] In contrast, the amount of PFOS that an individual can eat, drink, or breathe each day without a detectable risk is only 2 ng/L per day.[20] The EPA has also established a lifetime health advisory for PFOA and PFOS of 70 ppt.[21] The levels proposed by the Department are much higher than the levels shown to provide a risk to health, which is why it is crucial that the Department implements stricter MCLs.

The PFOA MCL should be as low as possible but should not exceed 6 ppt, and the PFOS MCL should be no greater than 5 ppt. When PFOA and PFOS are found combined in water, their combined concentration should be no higher than 11 ng/L. These levels are necessary to provide clean drinking water and protect Pennsylvanians' health.

II. The Department should expand the compounds covered under the proposed rulemaking to include more PFAS compounds, especially those DEP sampled for and found at some level within the state's environment.

The Department proposes not to "move forward" with MCLs for other PFAS compounds with this rulemaking. The Department cites incomplete cost/benefit data, lack of evidence of toxicity, and lack of treatability data for its decision. The Department further states that "the PFOA and PFOS proposed MCLs appear to be protective of other PFAS at least 96.3% of the

[18] *Per- and Polyfluoroaklyl Substances (PFAS),* Massachusetts Department of Environmental Protection (accessed March 27, 2022), https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas#:~:text=On%20October%202%2C%202020%2C%20MassDEP,concentrations%20of%20six%20specific%20PFAS

[19] Agency for Toxic Substances and Disease Registry, *Minimal Risk Levels (MRLs) for Hazardous Substances*, https://wwwn.cdc.gov/TSP/MRLS/mrlslisting.aspx

[20] *Id.*

[21] *Per and Polyfluoroalkyl Substances (PFAS) & Drinking Water*, Vermont Department of Environmental Conservation (accessed March 27, 2022), https://dec.vermont.gov/water/drinking-water/water-quality-monitoring/pfas.

time." However, the Department should also include the compounds PFNA, PFHxA, PFHxS, PFHpA, and PFBS under the proposed rule.

Because all of the dangers of PFAS are not yet known,[22] it is important to act preventatively. Since 1999, CDC surveys of the US population have detected additional PFAS compounds, including PFHxS and PFNA, in the blood of nearly every participant.[23] As mentioned above, other states have already adopted MCLs for PFAS compounds in addition to PFOS and PFOA.[24] The Department notes that these additional toxic compounds are present in Pennsylvania waters. Some of the levels of these compounds found in Pennsylvania waters are also incredibly high. For example, although the average sample for PFHxS was 1.4 ng/L, the maximum amount found was 140 ng/L. This means that some communities may experience higher levels of these additional compounds and may be at higher health risk because of those compounds.

The health studies that support setting low MCLs for PFOA and PFOS also support setting low MCLs for these other PFAS compounds found in Pennsylvania waters. The CDC has estimated that the amount of PFHxS an individual can eat, drink, or breathe each day without a detectable risk to health is only 0.02 ng/L per day,[25] while the amount of PFNA an individual can eat, drink, or breathe each day without a detectable risk to health is 2 ng/L per day.[26] Like PFOA

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[22] Panikkar et al, *Making the Invisible Visible: Results of a Community-led Health Survey Following PFAS Contamination of Drinking Water in Merrimack, New Hampshire*, 18 Environmental Health 79 (2019).
[23] *Per- and Polyfluoroalkyl Substances Chemical Action Plan*, Washington State Department of Ecology (Nov. 2021), https://apps.ecology.wa.gov/publications/documents/2104048.pdf.
[24] *See Per and Polyfluoroalkyl Substances (PFAS) & Drinking Water*, Vermont Department of Environmental Conservation (accessed March 27, 2022), https://dec.vermont.gov/water/drinking-water/water-quality-monitoring/pfas.
[25] Agency for Toxic Substances and Disease Registry, *Minimal Risk Levels (MRLs) for Hazardous Substances*, https://wwwn.cdc.gov/TSP/MRLS/mrlslisting.aspx
[26] *Id.*

and PFOS, these other PFAS compounds have various health effects. This includes potentially affecting the growth and learning of children, interfering with the body's natural hormones, and increasing the risk of cancer.[27]

Although the Department cites economic concerns as part of its decision to decline to propose MCLs for other PFAS compounds, the Department is obligated to provide clean water under the Clean Water Act and Pennsylvania's Clean Streams Law. The purpose of the Clean Water Act is to ultimately eliminate all discharge of pollutants into navigable waters.[28] The Clean Water Act's policy is to "restore and maintain the chemical, physical, and biological integrity" of our Nation's waters.[29] Pennsylvania's Clean Streams Law was enacted "not only to prevent further pollution of the waters of the Commonwealth, but also to reclaim and restore to a clean, unpolluted condition every stream in Pennsylvania that is presently polluted."[30] Clean water is "absolutely essential" for Pennsylvania and directly related to the Commonwealth's economic future.[31] To fulfill the purposes of both these laws, the Department cannot stop at regulating only PFOA and PFOS. It is necessary for the Department to regulate all of the PFAS compounds found in Pennsylvania waters, in order to protect the health of Pennsylvanians of all ages.

III. The proposed rulemaking should ensure equal protection for all and include all water supplies, including private wells.

At a minimum, the proposed rulemaking should provide protection to private well

[27] Agency for Toxic Substances and Disease Registry Division of Community Health Investigations, *Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)* Frequently Asked Questions, https://deq.nc.gov/media/9604/download.
[28] 33 U.S.C. § 1251(a)(3).
[29] 33 U.S.C. § 1251.
[30] 35 P.S. § 691.4(3).
[31] 35 P.S. § 691.4.

owners so that their drinking water source does not exceed MCL standards due to commercial and industrial activities beyond a private well-owner's control. The proposed MCLs will apply to 3,117 community, nontransient noncommunity, bottled, vended, retail and bulk water systems. Of these, 1,905 are community water systems, which serve approximately 11.4 million residents. Another 1,096 are nontransient noncommunity water systems, serving approximately 507,000 individuals. This means that about 12 million out of Pennsylvania's estimated 13 million population will be covered by the proposed rulemaking.[32] That leaves out almost one million Pennsylvanians.

Under the Pennsylvania Constitution, all Pennsylvanians have a constitutional right to clean water: "The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come."[33] This is not reserved to individuals served by public water systems. Therefore, the Department should at the very least protect private well owners who adhere to PFAS MCL standards and require commercial and industrial businesses to not pollute waterways, nor groundwater, with these chemicals.

The right to clean water is also not reserved for individuals in specific communities. The Department should ensure that communities with public wells near industries are protected. Because PFAS are used in many consumer, commercial, and industrial products, communities near industries are especially susceptible to groundwater contamination.[34] Minority and

[32] *Quickfacts: Pennsylvania,* US Census Bureau (accessed Mar. 27, 2022), https://www.census.gov/quickfacts/PA.
[33] Pa. Const. art. 1, § 27.
[34] *See* Panikkar et al, *Making the Invisible Visible: Results of a Community-led Health Survey Following PFAS Contamination of Drinking Water in Merrimack, New Hampshire*, 18 Environmental Health 79 (2019).

low-income neighborhoods are disproportionately targeted by industries and other polluting facilities.[35] This means that minority and low-income neighborhoods may be particularly affected by PFAS levels. Contaminated water is the primary source by which many individuals are exposed to PFAS, and higher levels of PFAS have been found in wells near industries.[36] This means that those communities may be more susceptible to detrimental health effects due to PFAS levels. The Department must ensure that communities are not disproportionately affected by PFAS,[37] as these communities are also entitled to clean water.[38]

IV. The Department should require all systems included in the rulemaking to begin sampling immediately with no monitoring delay.

The rulemaking proposes to phase in monitoring of larger and smaller systems over a two-year period. Customers of smaller systems will have to wait another year to find out if they are drinking water that contains PFOA and PFOS. This is far too slow given the impact on Pennsylvanians' health.[39] Timing is especially important for children, as PFAS compounds can detrimentally impact their growth, learning, and behavior.[40] Under the proposed schedule, people will continue to drink water that may contain PFAS without even knowing it. All consumers should be made aware of PFAS levels as soon as possible so that they may take steps to mitigate

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[35] Jim Erickson, *Targeting Minority, Low-income Neighborhoods for Hazardous Waste Sites*, University of Michigan News (Jan. 19, 2016), https://news.umich.edu/targeting-minority-low-income-neighborhoods-for-hazardous-waste-sites/.
[36] Panikkar et al, *supra* note 31.
[37] *See Environmental Justice Public Participation Policy*, Pennsylvania DEP (Apr. 4, 2004), http://www.depgreenport.state.pa.us/elibrary/GetDocument?docId=7918&DocName=ENVIRONMENTAL%20JUSTICE%20PUBLIC%20PARTICIPATION%20POLICY.PDF%20.
[38] Pa. Const. art. 1, § 27
[39] *See Our Current Understanding, supra* note 4.
[40] Agency for Toxic Substances and Disease Registry Division of Community Health Investigations, *Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Frequently Asked Questions* (accessed March 27, 2022), https://deq.nc.gov/media/9604/download.

their exposure and protect their families. For this reason, 3RWK proposes sampling to be conducted on all subject systems immediately with no monitoring delay.

V. The Department should ensure rigorous and ongoing monitoring by requiring annual sampling for all systems.

The proposed rule allows systems with no initial detections of PFOA or PFOS to undergo monitoring only every three years. This is not often enough. All systems included in the rulemaking should be required to sample annually. The proposed rule also allows waivers to reduce monitoring from annual to triennial for systems with previous detections below the MCL. No waivers should be allowed. For systems with detections above the MCLs, monthly sampling should be required until the level is reduced below the MCL. Once the level is reduced below the MCL, these systems should be allowed to use quarterly monitoring before returning to the annual requirement.

Sampling is critical because PFOA and PFOS are highly mobile in water, which means that the levels may change rapidly.[41] Monitoring only every three years means that a person may be ingesting PFOA and PFOS for up to three years without knowing it. For these reasons, 3RWK proposes monitoring all subject systems annually with no waiver. Additionally, to ensure compliance, the Department should provide an online portal, hotline, or some other mechanism through which the public can report potential PFAS pollution. 3RWK recommends creating mitigation and remediation plans to lower PFAS in drinking water sources when the values exceed the MCLs. Without such plans, our public health and safety are not secured and our right to clean water is not protected.

[41] Washington State Department of Ecology, *PFAS* (accessed April 6, 2022) https://ecology.wa.gov/Waste-Toxics/Reducing-toxic-chemicals/Addressing-priority-toxic-chemicals/PFAS#:~:text=PFAS%20are%20water%20soluble%20and,water%2C%20affecting%2019%20million%20people

VI. Conclusion

We appreciate the Department's decision to implement MCLs for PFOS and PFOA. However, given the health effects of the two compounds, the Department should implement more stringent MCL standards. For PFOA, this standard should not exceed 6 ppt. For PFOS, this standard should not exceed 5 ppt. The Department should also expand the PFOS compounds covered under the proposed rulemaking, as these compounds are also found in Pennsylvania waters and have similar detrimental health effects. All systems included in the proposed rulemaking should be required to implement testing immediately, and they should be held to annual, more frequent testing requirements. Finally, we ask that the Department ensure equal protection to all Pennsylvanians, as all Pennsylvanians have the right to clean water. We thank you for your careful consideration of our concerns. If any questions regarding our comments arise, do not hesitate to reach out to us.

Sincerely,

Heather Hulton VanTassel, PhD

Executive Director, Three Rivers Waterkeeper
230 Montclair Avenue
Pittsburgh, PA 15229