

February 26, 2022

Submitted Via eComment

Commission Secretary
Delaware River Basin Commission
P.O. Box 7360
West Trenton, NJ 08628-0360

RE: Comments on Proposed Rules on Importations of Water Into and Exportations of Water From the Delaware River Basin; Discharges of Wastewater from High Volume Hydraulic Fracturing and Related Activities

To the Commission Secretary:

Please accept these comments submitted on behalf of the Environment Health Project (EHP). The Environmental Health Project is a nonprofit public health organization that assists and supports residents of Southwestern Pennsylvania and beyond who believe their health has been, or could be, impacted by shale gas development (also known as hydraulic fracturing or fracking). We submit these comments to highlight the potential public health risks to residents in the Delaware River Basin. The importation of hazardous wastewater related to high-volume hydraulic fracturing for oil and gas places residents at higher risk of exposure to harmful substances.

EHP respectfully urges the Delaware River Basin Commission (DRBC) to deny the importation of high-volume hydraulic fracturing wastewater into the Delaware River Basin. This action is necessary because of the highly water-soluble nature of the toxics and contaminants in the wastewater and because the spills, accidents, and dumping that inevitably occur can negatively impact human health. The lack of cradle to grave tracking of oil and gas waste combined with unreliable industry self-reporting also add to public health risks.

The background section of the Notice of Proposed Rulemaking notes that the continued growth in Marcellus shale gas production immediately west of the Delaware River Basin will likely lead to an increase in the demand for centralized waste treatment (CWT) services. The demand for locations to process this wastewater will also grow. Increases in the volume of wastewater entering the basin will lead to increased risks of ground and water contamination, whether or not discharges of wastewater to water or soil are prohibited. Solid/sludge waste, equipment contamination, and air pollution

from processing or reusing this wastewater can also result in contamination of soil and water in the basin.

The EPA classifies oil and gas production wastes as radioactive, and since the waste is accumulated at the surface, it is referred to as Technologically Enhanced Naturally Occurring Radioactive Material (TENORM). Radium 226, present in oil and gas wastewater in Pennsylvania, is a particular health concern, having a half-life of 1,600 years and being water soluble. Long-term exposure to radium increases the risk of certain types of cancer, particularly lung and bone cancers. This is a public health concern wherever oil and gas wastewater is transported, stored, reused, or processed.

Another health concern is that equipment coming in contact with oil and gas wastewater will accumulate radioactive scale and create equipment cleaning and disposal issues. Any processing or transportation, reuse, and storage of this wastewater further concentrates the toxics in the resulting sludge/solid/equipment wastes, which will then require disposal. If these non-liquid wastes are disposed of in a landfill within the watershed that is not equipped to handle toxic waste, toxic leachate will result, as toxics in this waste are water-soluble. Storage or processing of oil and gas wastewater will create a concentrated toxic waste stream within the watershed that will require specialized disposal.¹

In addition, many of the chemicals in oil and gas wastewater have been linked to endocrine (or hormone function) disruption in the body and may have significant health impacts at very low doses. Particularly at risk are fetuses and children, as their bodies are growing and changing rapidly, and it is crucial that they receive the right hormones at the right time.²

Lastly, to add an additional level of concern, only a small portion of the chemicals found in shale gas waste have undergone any testing for human toxicity. Since the goal of these regulations are to protect the Delaware River watershed and the human population that depends on this watershed for drinking, it would be remiss to leave a loophole in the regulation allowing the transportation, storage, reuse, or processing of high-volume hydrofracking wastewater in the Delaware River Basin. It is much more efficient, cost effective, and health-protective to keep contaminants outside the watershed than it is to have to deal with a cleanup after contamination has already occurred. This is demonstrated clearly in the recent coverage of water contamination concerns in Dimock, Pennsylvania, where residents received \$40,000 treatment systems that failed to provide clean water.³

**ENVIRONMENTAL
HEALTH PROJECT**
DEFENDING PUBLIC HEALTH 2012-2022
environmentalhealthproject.org

We ask that the DRBC deny the importation of high-volume hydraulic fracturing wastewater into the Delaware River Basin in order to protect the health of all residents.

Respectfully,

Deborah Larson
Medical Outreach Coordinator

Environmental Health Project
2001 Waterdam Plaza Drive #201
McMurray PA 15317
(724) 260-5504
DLarson@EnvironmentalHealthProject.org

¹ US EPA, TENORM: Oil and Gas Production Wastes. Accessed 2/23/22.
<https://www.epa.gov/radiation/tenorm-oil-and-gas-production-wastes>

² Gore, A. C., Chappell, V. A., Fenton, S. E., Flaws, J. A., Nadal, A., Prins, G. S., Toppari, J., Zoeller, R. T. (2015). EDC-2: The Endocrine Society's Second Scientific Statement on Endocrine-Disrupting Chemicals. *Endocrine Reviews*, 36, 6, E1–E150. <https://doi.org/10.1210/er.2015-1010>

³ Rubinkam, M. (2022, February 18). 'Irreversible': No easy fix for water fouled by gas driller. AP NEWS. Accessed 2/24/22. <https://apnews.com/article/business-environment-and-nature-pennsylvania-pollution-aquifers-0b3192410218270550ce362dfe9d9c57>