## Judi Roggie

Written Comment by Judi Roggie, 1830 Felicity Lane, Hellertown PA 18055 submitted March 19, 2018

Thank you for extending the comment period on your proposed draft regulations addressing hydraulic fracking and additional clarifying amendments. I feel that we must give residents of the Delaware River Basin watershed sufficient time and opportunity to express their opinions and concerns for the issues these regulations address. We are very fortunate to live in an area that has such high-quality water, and we realize that this water is vital to our health, our wellbeing, indeed to our very existence.

I totally support your proposed ban on fracking drilling, it makes total sense to me. But I am confused and concerned that your draft regulations address circumstances in which wastewater from fracking outside the watershed can be stored within the watershed, this just makes no sense to me. I also don't understand why you would address certain conditions by which fresh water from our watershed could be transported from the watershed for use in fracking outside the watershed; this also makes no sense to me. The only way that I could support addressing these issues is to have a total ban on all fracking related activities; no drilling, no withdrawal of fresh water for use in fracking, and no acceptance of fracking wastewater in our watershed. Anything else has too much potential for introducing contamination to our groundwater.

The 17 million people who depend on getting their drinking water from the Delaware River Basin watershed benefit from the oversight and regulation that your commission provides; I thank you for that service. It's so easy to take for granted that we will have safe water and that generations to come will have safe water, but once I started to learn about fracking I realized that some businesses place their quest for monetary profits above the health of citizens and protection of our environment. The only way to protect our watershed is to prohibit all activities associated with fracking.

Frack wastewater is a toxic blend of carcinogens. Yale University School of Public Health has studied chemicals used in fracking. Although there is insufficient data on many of the materials, of the 20% that could be properly evaluated "44 percent of the water pollutants and 60 percent of air pollutants were either confirmed or possible carcinogens." 55 unique compounds with carcinogenic potential could be released to both water or air and 20 chemicals had specific evidence of increased risk for leukemia or lymphoma.

It is well known that radioactivity exists in this wastewater. Data gathered by New York State detected Radium-228 and Radium-226, in Marcellus Shale. Radium-226 is the longest-lived isotope of radium with a half-life of 1600 years. The risk associated with the mere transport of wastewater through the watershed is not acceptable. Any storage of fracking wastewater is just an accident waiting to happen. The materials available to contain this waste will surely degrade long before this radiation has deteriorated. Conservative estimates show that cement and steel will degrade in 80-100 years. We must also remember that we do experience earthquake tremors in our watershed another opportunity for a containment site to contaminate our precious watershed.

Providing fresh water from our watershed to promote fracking elsewhere just seems to go against the existing DRBC Water Code that requires the consideration of alternatives and their economic and social impacts, and one alternative that is always available is no project. In my state,

Pennsylvania, the PADEP has determined that hundreds of private water wells have been contaminated by fracking operations. Since we know that fracking pollutes even when operations are regulated, how and why should there be any circumstance where a watershed resource is used to make fracking possible?

In Pennsylvania, we've had an Environmental Rights Amendment to our state's Constitution's Declaration of Rights that was passed in 1971, and has been in force for 47 years. This amendment, Article 1, section 27 reads:

The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and aesthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people. This totally makes sense to me and many of us believe that every state should have this goal and protection. Since Pennsylvania is represented on this commission it seems to me that the DRBC should be bound to protect our environment, now and for future generations.

Thank you for letting me and others speak and PLEASE BAN ALL FRACKING.

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