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## Dear Commissioners,

I am shocked that it is not self-evident that, whatever the short-term financial benefits may be, fracking is by now not seen as an unmitigated environmental disaster. We of the older generation have truly fucked up the world, and fracking is an excellent example of how we are ruining and despoiling the natural world for short-term greed and gain and leaving a planet behind where no human will find clean air, clean water, or clean ground.

In a press event at COP23, Robert Howarth, the David R. Atkinson Professor of Ecology at Cornell University said, "Methane is an important greenhouse gas and is currently responsible for an amount of global warming equal to approximately 60% of that caused by carbon dioxide. Methane reductions offer one of the few available approaches to immediately slow the rate of global warming, since the climate responds more quickly to decreases in methane compared to carbon dioxide." A ban on fracking in the Delaware River Basin is an important step in limiting methane emissions, but allowing water withdrawals and the processing of fracking waste in the Basin will only enable more fracking and, therefore, more methane leaks outside of the basin.

When a site is developed for gas well development, the change is dramatic, essentially transforming the land to an industrial landscape. The result is destruction of acres of vegetation (8.8 acres per well pad in 2011 with 30 acres of forest impacts due to edge effects, more than double that is the trend today), soil compaction and destruction of the natural land contours, alterations to watershed drainage patterns, and hydrologically connected systems such as wetlands and vernal pools. Habitats and complex ecosystems are disrupted or lost. 85% of the Upper Delaware where the Marcellus Shale is located is forested. Forest destruction and fragmentation in turn destroys the ability of the forest ecosystem to capture, clean, and infiltrate precipitation, removes the trees that sequester carbon, reduces biodiversity, encourages invasive species, and destroys vital habitat., Pennsylvania's Wolf administration talks about a 100-year cycle of shale gas development. At present, there are about 10,000 wells in the ground. The industry's goal is 100,000 wells. In the past ten years, more than 300 confirmed cases of water contamination have occurred. Some of those cases involve several families.

More than 9,400 complaints have been filed with the DEP. More than 4,400 of those are water-related. Most have gone unaddressed. More than 1200 peer-reviewed studies have identified wide-ranging health effects already impacting Pennsylvanians. Dead cattle and fish kills are just some of the indications that shale gas development is affecting our farm animals and wildlife. Quality of life is all but gone for many in the shale fields and the many more who now spend every available minute fighting pipeline and infrastructure projects. And all of that and much, much more is what has happened just ten years in. Any action by the DRBC that enables an industry that has done so much to harm Pennsylvanians in just ten years and exposes the basin to the particular threats fracking waste and water extraction pose is unacceptable. The DRBC must impose a full fracking ban.

On March 13, leading scientists and physicians released the Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking, 5th Edition documenting fracking's harm to public health. Please read all of the study's findings. Their conclusion, and mine, is that the only way to truly protect public health is to prohibit fracking and all its associated activities (waste hauling, treatment, disposal). I urge you to ban all of these activities in your final regulations.

Sincerely

James Loney