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Dear Commissioners,

Fracking provides us with a natural resource and I believe the cost is too high.

The regulations proposed by the DRBC are setting up an unsustainable cycle of sending clean water out of the basin and bringing highly contaminated water into the basin. If we are to successfully combat climate change, we must stop our unsustainable practices and avoid implementing new ones.

DRBC's draft regulations do not specifically propose that injection wells that would hold frack wastewater be allowed in the Delaware River Watershed. However, they do propose to allow wastewater from fracking to be brought into the Watershed for storage, treatment and discharge so "storage" could mean long-term storage of wastewater in underground wells within the Basin. This is a practice that threatens public health and the environment. Injection of wastewater does not "treat" waste or remove contaminants, it simply moves the toxic wastewater produced by fracking from one place and time to another. It risks the migration of untreated toxic and radioactive frack wastewater to aquifers and surface water through leaks from the injection well and spills and accidental releases while being handled. Injection wells are causing earthquakes in Ohio and Oklahoma as well as other locations, as documented by USGS and other scientific institutions. Injection wells are not leak-proof and can expose groundwater and aquifers to contamination from the toxic mix that constitutes untreated frack wastewater when seals are broken and fractures occur as a result of seismic activity. 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. Changes to stream water quality

occur where gas drilling and related activities are located. For instance, a publication of the Proceedings of the National Academy of Sciences found streams adjacent to gas wells are negatively impacted by runoff and sedimentation (Total Suspended Solids), harming benthic life, fish and wildlife and causing streams to be eroded and destabilized. DRBC follows the state's stormwater rules where a project is located, leaving loopholes in current nonpoint source laws that allow fracking activities to escape strict oversight. This would be a recipe for disaster if fracking were to occur, which is why it must be banned in the Delaware River Watershed., 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

Karen Veit