

Carol Armstrong

My comments are in support of the DRBC's moratorium on all gas drilling, hydraulic fracturing, and water withdrawals for waste water treatment as a result of fracking, and discharges from fracking throughout the Delaware River Basin. I am hopeful that the DRBC will rule that these bans become permanent in order to help restore and conserve our beautiful, exceptional, Congressionally designated, National Wild and Scenic River, the Delaware, and the National Delaware Estuary because of their irreplaceable beauty, source of drinking water, and ecological productivity that earn them protections from commercial interests that threaten them despite regulations. Once water and the life within it is damaged, the balance cannot be restored or recovered. The DRBC has recognized that water withdrawals for volumes needed for fracking can adversely affect aquatic ecosystems, river channels, riparian resources, and wetlands.

The entire nontidal Delaware River is protected by DRBC's Special Protection Waters regulations that state that the water quality cannot be diminished in any way, and we are dependent on the wisdom of the DRBC that led to these regulations. DRBC policy is being broken by permitting drilling and fracking, such as the importation of waste water into the Delaware Basin. Furthermore, drilling and fracking cannot be done safely or without environmental contamination. We have depended on dilution or sequestration of waste water for safety, but these methods only will and have resulted in slow and continuous decline in ground and surface water quality. The EPA documented that 70-90% of the water injected for fracking is permanently removed from the water cycle. Findings are that 80% to 90% of water used in Marcellus and other sites is fresh water! And developing methods for fracking are requiring increasing volumes of fresh water. Remediation is a poor substitution for conservation, and there is no lack of support for conservation despite the political tendency to break regulations with variances for commercial development.

There is a shift in social opinion, which is emerging most clearly in new generations of voters, that the values that come from environmental rights must not take second place to the values that come from commercial development. The risks for human health are major; the Concerned Health Professionals of New York, and the Physicians for Social Responsibility, reviewed at last count 685 peer-reviewed papers investigating gas drilling and/or hydraulic fracturing. The November 17, 2016, fourth edition of their review of this large body of studies, show that the great majority, and growing consensus, of scientific evidence is that the risks of this type of activity include earthquakes, adverse impacts on water, on air, on agriculture, on public health and safety, on property values, on climate stability, and on economic vitality. It is not a matter of individual reports, anecdotal evidence, or scientific predictions, but converging and confirming scientific conclusions. They "uncovered no evidence that fracking can be practiced in a manner that does not threaten human health". The long term and future effects are unknown because government resists and actually thwarts scientific inquiry especially about long-term risks. For example, the introduction of hundreds of new chemicals, most of which are not now and never investigated for effects on humans and ecology, is extremely concerning. There needs to be monitoring of the changes to water supplies in the hydrologic cycle, and an analysis of how water removal for fracking is affecting our water resources. As a citizen, the value of my tax dollars for scientific study with resulting knowledge about the health of our environment and everything it produces for both humanity and ecological diversity, is one of the most important contributions I can make to future generations.

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