

**IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA**

WAYNE LAND AND MINERAL GROUP LLC

Plaintiff,

v.

No. 3 :16-cv-00897-RDM

Hon. Robert D. Mariani

DELAWARE RIVER BASIN COMMISSION,

Defendant

and

DELAWARE RIVERKEEPER NETWORK,

MAYA K. VAN ROSSUM, THE DELAWARE

RIVERKEEPER,

Intervenors-Defendants.

AMICUS CURIAE BRIEF BY DAMASCUS CITIZENS FOR SUSTAINABILITY, INC. IN
SUPPORT OF DELAWARE RIVER BASIN COMMISSION

ARGUMENT

On January 5, 2017, this Court entered an order allowing Damascus Citizens for Sustainability, Inc. (DCS) to submit an amicus curiae brief in this case. This amicus brief is filed in support of the Delaware River Basin Commission (DRBC or “Commission”) and its jurisdiction under the Delaware River Basin Compact (Compact) to regulate oil and gas development projects in the Delaware River Basin (Basin).

DCS is a non-profit 501(c)(3) grass roots citizens group focused on protection of public health and the environment from pollution caused by oil and gas development

using hydraulic fracturing and horizontal drilling and production and related activities and infrastructure (hereafter “fracking.”). Many of DCS’s nearly 5000 members live, work, have interests in, and recreate in the Delaware River Basin. Millions of others, such as residents of New York City and Philadelphia, use water from the Basin. DCS and its members rely on the Compact and its implementation by the Delaware River Basin Commission to review and regulate any and all projects that may have an adverse effect on the waters of the Basin and, by extension, public health and the environment of the Basin.

Since its inception in 2008 DCS has seen a growing number of cases where individuals and communities outside the Basin have suffered serious health impacts from pollution caused by fracking near their homes and communities or upstream from them. DCS and its members are very concerned that similar types of fracking impacts would occur in the Basin if fracking activities are determined to be beyond the control of DRBC.

The purpose of this amicus brief is to better inform this Court about the adverse human health impacts that have been caused by oil and gas development using fracking in areas outside the Basin that are not subject to the Commission’s project review authority. As discussed in the Arrindell Declaration (attached as an exhibit to this brief), in many other parts of Pennsylvania that are outside of the Basin and in other parts of the country there have been very significant adverse health impacts caused by fracking. To the best of our knowledge, no one who lives, works, or recreates within the Basin has experienced such health impacts as yet for one and perhaps only one reason. That reason is the moratorium on fracking projects and the protections built into the Compact and the regulatory controls established and enforced by DRBC.

There are several recently published reports on adverse health effects related to fracking. Information about many of the thousands of health impact cases is reported in one or more of the reports attached as exhibits to this brief: These reports are:

1) *Compendium of Scientific, Medical, and Media Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction)*, Concerned Health Professionals of New York and Physicians for Social Responsibility, (4th Edition November 17, 2016)(“Compendium”);

2) *Hydraulic Fracturing For Oil and Gas: Impacts From the Hydraulic Fracturing Water Cycle On Drinking Water Resources In the Unites States* (EPA, December 12, 2016)(“EPA HF Study”);

3) *A Public Health Review of High Volume Hydraulic Fracturing for Shale Gas Development* (New York Department of Health, December 17, 2014) (“NYDOH Report”); and

4) Fracking Impacts on a More Local Level: *The List of the Harmed, Pennsylvania Determination Letters and the Hallowich Family Saga*.

5) *Letter from League of Women Voters to DRBC Commissioners:*

The Compendium <http://concernedhealthny.org/compendium/>

The Compendium collects over 900 scientific studies, federal and state reports, and media reports related to adverse health impacts from fracking. Dr. Larysa Dyrszka, co-founder of Concerned Health Professionals of New York and a member of DCS, summarizes the lessons from the Compendium this way, “Our extensive literature compilation and analysis demonstrates without question that the harms are far greater than any benefits, and that the list of such literature is increasing exponentially.” She summarizes the current situation with fracking as follows:

“At issue is not just what we know. It is what we still do not know, such as the identification and effects of all the endocrine disruptors in industry components that leach into groundwater and pollute the air, the amount of radioactivity that can impact the waters and as a consequence people who drink it, and the toll such impacts will have on all people, but importantly, the most vulnerable. Some of the chemicals used in [fracking] cause fetal demise and congenital defects; some cause exacerbations of asthma and neurological problems; others have effects long-term and cause cancer. That toll will be paid in health care expenditures, lost school and work, and even deaths. Regulations, even with the best intentions, have not worked to protect health. Fracking and the proliferation of the infrastructure that supports it is an inherently dangerous, highly industrialized process that no regulations have been able to make safe.

The NYDOH Report https://www.health.ny.gov/press/reports/docs/high_volume_hydraulic_fracturing.pdf

The NYDOH Report was researched and prepared by the New York State Department of Health after a two year review including consultation with public health officials and experts in several other states with shale gas development. The final report summarized the study process as follows (Executive Summary, p.1):

“In conducting this public health review DOH: (i) reviewed and evaluated scientific literature to determine whether the current scientific research is sufficient to inform questions regarding public health impacts of HVHF; (ii) sought input from three outside public health expert consultants; (iii) engaged in field visits and discussions with health and environmental authorities in states with HVHF activity; and (iv) communicated with multiple local, state, federal, international, academic, environmental, and public health stakeholders. The evaluation considered the available information on potential pathways that connect HVHF activities and environmental impacts to human exposure and the risk for adverse public health impacts.

The final Report was presented to Governor Cuomo in December, 2014. The conclusion of the Report was:

“As with most complex human activities in modern societies, absolute scientific certainty regarding the relative contributions of positive and negative impacts of HVHF [high volume hydraulic fracturing] on public health is unlikely to ever be attained. In this instance, however, the overall weight of the evidence from the cumulative body of information contained in this Public Health Review demonstrates that there are

significant uncertainties about the kinds of adverse health outcomes that may be associated with HVHF, the likelihood of the occurrence of adverse health outcomes, and the effectiveness of some of the mitigation measures in reducing or preventing environmental impacts which could adversely affect public health. **Until the science provides sufficient information to determine the level of risk to public health from HVHF to all New Yorkers and whether the risks can be adequately managed, DOH recommends that HVHF should not proceed in NYS.**” (emphasis added).

Shortly thereafter the Governor decided to ban high volume fracking across all of the state.

The EPA HF Study

Adverse public health impacts from contamination of the environment by fracking activities are also documented in the EPA HF Study released to the public in December 2016. This Study looked at the impacts of fracking on drinking water resources. After six years of work by EPA and its Science Advisory Panels and Board, the agency released its 666 page report, a 50 page executive summary and 572 pages of exhibits. As summarized in the executive summary https://www.epa.gov/sites/production/files/2016-12/documents/hfdwa_executive_summary.pdf EPA reached the following

conclusions (ES pp. 1-2):

“The hydraulic fracturing water cycle describes the use of water in hydraulic fracturing, from water withdrawals to make hydraulic fracturing fluids, through the mixing and injection of hydraulic fracturing fluids in oil and gas production wells, to the collection and disposal or reuse of produced water. These activities can impact drinking water resources under some circumstances. Impacts can range in frequency and severity, depending on the combination of hydraulic fracturing water cycle activities and local- or regional-scale factors. The following combinations of activities and factors are more likely than others to result in more frequent or more severe impacts:

- Water withdrawals for hydraulic fracturing in times or areas of low water availability particularly in areas with limited or declining groundwater resources;
- Spills during the management of hydraulic fracturing fluids and chemicals or produced water that result in large volumes or high concentrations of chemicals reaching groundwater resources;

- Injection of hydraulic fracturing fluids into wells with inadequate mechanical integrity allowing gases or liquids to move to groundwater resources;
- Injection of hydraulic fracturing fluids directly into groundwater resources;
- Discharge of inadequately treated hydraulic fracturing wastewater to surface water resources; and
- Disposal or storage of hydraulic fracturing wastewater in unlined pits, resulting in contamination of groundwater resources.

The above conclusions are based on cases of identified impacts and other data, information, and analyses presented in this report. Cases of impacts were identified for all stages of the hydraulic fracturing water cycle. Identified impacts generally occurred near hydraulically fractured oil and gas production wells and ranged in severity, from temporary changes in water quality to contamination that made private drinking water wells unusable.”

Fracking Impacts on a More Local Level (Exhibit 2)

The cumulative impacts of a multiplicity of wells, well pads, access roads, processing facilities, waste pits, condensate tanks, solid and liquid waste handling including spills and illegal dumping, compressors, truck traffic hauling chemicals, water, wastes and building materials, pipelines, social impacts, etc. are a function of the processes. The totality is greater than the individual segmented parts when looking at the environmental and health impacts. To get an understanding of the full spectrum of fracking impacts on individuals and families across the nation we have included *The List of the Harmed* <https://pennsylvaniaallianceforcleanwaterandair.wordpress.com/the-list/> which provides a short summary of fracking impacts on nearly 22,000 individuals nationwide. On a state level in Pennsylvania, the Department of Environmental Protection has sent between 2008 and 2012 (with more since then) what are known as

Determination Letters to over 160 homes and businesses to inform them that fracking has impacted their water supply source. An example of one of these letters is included as Exhibit 2(a) to this brief. Other examples can be found at <http://www.damascuscitizensforsustainability.org/pa-dep-determination-letters>

On an individual family level, we have attached information about the impacts of fracking on the Hallowich family in Hickory, PA (Washington County). Included as Exhibit 2(c) is an article with maps of what surrounded their home and an amicus brief filed in their case. The severity of impacts on the Hallowich family is typical of the inundation of industrial activities near homes that result in devastating impacts of fracking on families across the nation.

Also we would like the Court to see a pictorial review of some of the multi-million gallon liquid waste holding impoundments in western PA with some of the violations and fines they have received after pollution events <http://www.marcellus-shale.us/centralized-impoundments.htm> Such impoundments are not in Basin because of the Commission's authority to protect the Basin. Further, in Exhibit 3 are comments on low dose chemical impacts on health from The Endocrine Disruption Exchange and a few examples of what happens when there are flood events where there is drilling including resulting carriage and spread of chemicals and hydrocarbons downstream with floodwaters - there are floods in the DRB.

The total impacts from fracking nationwide have not extended to the Delaware River Basin because the Commission has supported the moratorium on fracking embodied in the Executive Director's determinations in 2009 and 2010. This litigation

challenges the Commission's authority under the Compact to protect the Basin, including the tens of millions of water users who depend on these water resources every day.

We have laid out in this brief and its exhibits some of the devastating impacts that would follow in the Basin if this Court determines that the Commission does not have the authority to regulate – including the authority to ban -- fracking in the Basin. Finally, we draw the Court's attention to a recent letter (copy attached as an exhibit) sent by the League of Women Voters to each of the Commissioners imploring them to exercise the authority given to them in the Compact to ban fracking in order to preserve the Basin's water resources for current and future generations.

CONCLUSION

For the forgoing reasons this Court should grant the motion to dismiss filed by the Delaware River Basin Commission.

Respectfully submitted,

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January 19, 2017