

Dear Governors Wolf, Murphy, Cuomo, and Carney, and Brigadier General Graham,

My name is Corinne Mayland and I live with my family in Lansdale, Pennsylvania, a municipality within the Delaware River Basin.

I strongly support the proposal to ban fracking in the watershed. Yet I ask the commission to go further and ban water withdrawals for fracking or fracking-related purposes. As for the disposal and discharge of wastewater associated with fracking production, I ask for either a ban on this in the river basin or at least a moratorium on allowing any fracking wastewater project onto the docket.

The data supports a ban of fracking in the watershed, yet industry supporters still try to cite data to say fracking is safe. At the January 25, 2018 1pm DRBC Public Hearing, Mr. Jonathan Lutz, Associate Director with the American Petroleum Institute (API), cited the September 2017 report from the Susquehanna River Basin Commission's Remote Water Quality Monitoring Network as confirmation that fracking is safe. I challenge that conclusion. That report is 1) a "preliminary trend analysis"¹ of data from wells reporting 3-6 years of data through 2015, 2) tests surface water only, not groundwater or wells, 3) had only 39 of the 59 monitoring stations with actively fractured wells, so the small sample is actually even smaller, and so small that only gross changes would be picked up in any sub-analysis, 4) assessed only 6 leading indicators at every monitoring station, and 5) "has not detected discernible impacts on the quality of the Basin's water resources" is not synonymous with concluding there are no impacts². Indeed, the report says increasing ion concentrations were seen, which may be an effect of fracking. The SRBC's monitoring network is an early warning system, not yet a quantitative impact study. I look forward to more robust data in the future, such as the water chemistry results that will be available at the 10 year mark, including correlation tests on the 21 variables measured at select stations. This SRBC data is preliminary. In contrast, the overall body of data is robust enough to support a ban on fracking in the Delaware River Basin.

Regarding water withdrawals, I applaud the commission's effort to propose water withdrawals for fracking require DRBC approval, because there was an existing loophole whereby draws could have occurred just under the daily average 100,000 gallon threshold. But that proposal is not enough. We need to conserve drinking water supplies. Most of the area surrounding my town is a Southeastern Pennsylvania Ground Water Protected Area (GWPA). The main goal of the GWPA is to prevent the depletion of ground water. I and my neighbors are thankful for this acknowledgement that groundwater needs extra protection because all of our drinking water comes from local surface reservoirs and a few local groundwater wells. And our water provider, North Penn Water Authority, states that "In the summer months and times of low flow, water is pumped from the Delaware River at Point Pleasant and diverted into the North Branch Neshaminy Creek"³. So my Borough needs the Delaware River water volume safeguarded as

¹ Author's words, from SRBC, "Continuous Water Quality Trends in the Susquehanna River Basin: 2016 Summary report", published Sept 2017 (accessed from <http://mdw.srbc.net/remotewaterquality/assets/downloads/pdf/continuous-water-quality-trends-susquehanna-basin-summary-2016.pdf>)

² Ibid.

³ <http://northpennwater.org/About-Your-Water?nav=p-43-About-Your-Water>

well. Protecting those water levels is getting harder as weather patterns get more erratic. Does anyone have a 2017 hydrologic model that predicted our wet summer would transform into river water levels too low to even allow the re-enactment of George Washington's Christmas Day crossing of the Delaware? The volume of water within the Basin needs to be maintained. It is a finite resource.

Now, some argue in favor of the draft ruling, claiming that the volume of consumptive water use per fracking event is about the same size as withdrawals the DRBC has approved for a golf course, and far less than that the volume approved for use by the Limerick power plant. That volume comparison may be true, but there are important differences. One, water for golf course irrigation stays within the basin, so it is not an appropriate analog. Two, the water that is part of the intrabasin transfer to Limerick still stays in the water cycle. By contrast, the EPA estimates 70-90% of the water for a fracking event permanently leaves the water cycle⁴. Thirdly, golf courses and cooling towers do not significantly pollute the water that is withdrawn; adding chemicals to the waters for fracking does pollute the water. For the very same reasons that fracking is proposed to be banned in the basin, withdrawals of water to support fracking in a different basin should also be banned. Again, I ask the commission to ban water withdrawals for fracking or fracking-related purposes.

As for the discharge of fracking produced water by a CWT, I applaud the commission's efforts to increase the quality standards for monitoring this type of water, but I believe it doesn't go far enough. How can this commission be confident their monitoring proposal will deliver safe water quality if it doesn't really know all that needs to be monitored for? For years, other agencies have fought to have companies disclose the composition of fracking fluid additives. The EPA wanted to do prospective studies of produced water composition, but the oil and gas industry so whittled away the study's scope that the EPA was left with industry's voluntary submissions to FracFocus as the basis of their assessment. The DRBC proposes to use the resulting EPA list as the basis of a "set of pollutants of concern"⁵. That is not enough. We all know that chemicals remain undisclosed because they were deemed 'confidential business information'. The EPA confirmed this, stating such nondisclosure occurred among over 70% of the wells reporting to FracFocus – the very data source the EPA had to rely on in their report⁶. A person may think leaving out a handful of chemicals is no big deal, but many chemicals are hazardous at levels in the parts-per-million. Looking to that EPA-published list is indeed necessary, but it is not sufficient. Therefore, I do not believe it meets the DRBC's mission of "Basing decisions on sound science."⁷ I ask that the commission either ban the discharge of fracking produced water by a

⁴ DRBC "Proposed Amendments to the Administrative Manual and Special Regulations Regarding Natural Gas Development Activities; Additional Clarifying Amendments.", published November 2017 in RulemakingNotice113017. P. 7 reference of SRBC NG Water Use 2016, p. 38.

⁵ DRBC "Proposed Amendments to the Administrative Manual and Special Regulations Regarding Natural Gas Development Activities; Additional Clarifying Amendments.", published November 2017 in RulemakingNotice113017. P. 19 reference of EPA TDD 2016, pp. 59-81 (Part C.3).

⁶ EPA, "Assessment of the Potential Impacts of Hydraulic Fracturing for Oil and Gas on Drinking Water Resources", EPA/600/R-15/047a | June 2015 (accessed from https://www.epa.gov/sites/production/files/2015-06/documents/hf_es_erd_jun2015.pdf)

⁷ DRBC Mission, as stated within Vision Statement (accessed from http://www.state.nj.us/drbc/library/documents/DRBC_vision-mission.pdf)

CWT, or formally issue a moratorium on it, pending further scientific data in the form of multiple, independently-reviewed studies regarding the composition of produced water.

If the commission proceeds with putting the cart before the horse – namely, outlining how to test fracking produced water before finalizing what is in that water, then I ask the commission to increase the scientific rigor of the requisite treatability studies and methods to assess background concentrations. I advise against having the fracking producers conduct the treatability studies, due to obvious conflict of interest. The standard should include independently-reviewed treatability studies to account for bias and ensure reproducibility.

Management of the water resources in the Delaware River Basin obligates having a long view. This commission responsibly took the time to get the data that now supports the draft ban on fracking in the watershed. I believe it is also enough to support banning water withdrawals for fracking or fracking-related purposes. As for the disposal and discharge of wastewater associated with fracking production, either ban it or put a moratorium in place so the DRBC can again take the time to get the data.

Thank you for your consideration, and for providing an open comment period.

Kind regards,

Corinne Mayland
Resident of Lansdale, Montgomery County, Pennsylvania, 19446

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