



March 30, 2018

Via Online Submission Only

<http://dockets.drbc.commentinput.com>

Commissioners
Delaware River Basin Commission
P.O. Box 7360
25 Cosey Road
West Trenton, NJ 08628

Re: Public Comments on Proposed Rule, 18 CFR Parts 401 and 440 - Administrative Manual and Special Regulations Regarding Natural Gas Development Activities; Additional Clarifying Amendments

Dear Commissioners:

Citizens for Pennsylvania's Future ("PennFuture") offers these comments regarding the proposed natural gas development regulations (the "Draft Regulations"), which propose the following:¹

to amend its Special Regulations by the addition of a section on hydraulic fracturing in shale and other rock formations, including: the prohibition of high volume hydraulic fracturing in such formations; provisions related to water use for hydraulic fracturing; and provisions related to the management of produced water from hydraulic fracturing . . . [and] to amend its Administrative Manual – Rules of Practice and Procedure by the addition of project review classifications

¹ DRBC Rulemaking Notice (Nov. 30, 2017), *available at* <http://www.state.nj.us/drbc/library/documents/HydraulicFracturing/RulemakingNotice113017.pdf>. PennFuture is not herein commenting on the "[m]inor amendments to the project review classifications unrelated to hydraulic fracturing [that] are also proposed."

and fees related to the management of produced water from hydraulic fracturing of hydrocarbon bearing rock formations.

The Draft Regulations were made available to the public on November 30, 2017, and the Delaware River Basin Commission (“DRBC” or the “Commission”) is accepting comments on the Draft Regulations through March 30, 2018. PennFuture thanks the Commission for this opportunity to comment on the Draft Regulations.

PennFuture is a Pennsylvania state-wide environmental organization whose purposes include advocating and litigating on behalf of the environmental and public health, water quality, and issues arising out of natural gas drilling activities. PennFuture’s membership includes residents of Pennsylvania who use rivers, streams, and lands within the Delaware River Basin for fishing, boating, and other forms of recreation, as well as Pennsylvanians who rely on the Basin’s waters as sources of drinking and household water.

While PennFuture strongly supports the proposed prohibition on high-volume hydraulic fracturing² methods (herein referred to as “fracking”) of shale and other rock formations within the Delaware River Basin (“Basin”), we believe that the proposed regulations regarding interbasin water transfers and the transport, storage, treatment and disposal of fracking wastewater should be strengthened in order to ensure protection of the Basin resources.

At this time, the environmental and human health risks from natural gas development by fracking are well known, as the Supplementary Information thoroughly details.³ The Commission must ensure not only that the Basin resources are protected from the effects of fracking, but also from the attendant operations that can pose just as great, if not greater, risks to the waters of the Delaware.

The significant environmental and public health harms are real. According to the US Environmental Protection Agency’s (“EPA”) recent analysis,⁴ the

² As this term is defined in the Draft Regulations at 18 CFR § 440.2.

³ See generally DRBC Rulemaking Notice, Supplementary Information (“Supplementary Information”), at 4-11.

⁴ EPA, *Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States*, EPA-600-R-16-236ES (December 2016), Executive

following are just some conditions that can exacerbate the impacts from the fracking-related activities in the Draft Regulations:

- 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 handling of produced water (e.g., during storage, transport, and/or treatment) that result in large volumes or high concentrations of chemicals reaching groundwater resources;
- Discharge of inadequately treated hydraulic fracturing wastewater to surface water; and
- Disposal or storage of hydraulic fracturing wastewater in unlined pits, resulting in contamination of groundwater resources.

While the Commission's proposed prohibition on fracking within the Basin eliminates some of these risks, allowing water to be exported from the Delaware and fracking wastewater⁵ to be transferred, stored, treated, and disposed within the Basin means that some of the most harmful impacts to surface water still remain. The Commission's Draft Regulations must be strong enough to ensure that harms from these fracking-related activities never jeopardize the Basin's water resources and the drinking water of over 15 million people.

Consequently, as set forth in detail below, PennFuture urges the Commission to do the following:

- **Adopt that portions of the Draft Regulations that prohibit fracking within the Basin;**
- **Reject the portions of the Draft Regulations related to water use for fracking until the regulations are strengthened to ensure protection of Basin resources; and**

Summary, available at https://www.epa.gov/sites/production/files/2016-12/documents/hfdwa_executive_summary.pdf.

⁵ Throughout these comments we use the term "fracking wastewater" to refer to "produced water" and "CWT wastewater" as those terms are identified in 18 CFR § 440.2 of, and regulated throughout, the Draft Regulations.

- **Reject the portions of the Draft Regulations related to the management of produced water from fracking until the regulations are strengthened to ensure protection of Basin resources.**

Importantly, for the protection of Basin resources, should the Commission reject any portion(s) of the Draft Regulations, it must not allow any such activities – whether fracking, water exportation for fracking, or storage, treatment, and disposal of fracking wastewater – to occur within the Basin unless and until new, more stringent regulations are adopted.

I. The Commission Should Adopt the Proposed Regulations That Prohibit Fracking within the Basin

The Commission Has the Authority and the Duty to Regulate Fracking

There can be no question that the Commission has the authority – and the duty – to regulate fracking in order “to effectuate the comprehensive plan for the immediate and long term development and use of the water resources of the basin, and to conserve, preserve and protect the quality and quantity of the basin’s water resources for uses in accordance with the comprehensive plan.”⁶

Commission staff has identified the numerous risks associated with fracking that could negatively impact the Basin’s water resources in its “Supplementary Information” included with the Notice of Proposed Rulemaking.⁷ And the Commission is not alone in its recognition of the myriad risks posed by fracking; the EPA,⁸ New York State,⁹ Maryland,¹⁰ and others have identified the extremely

⁶ DRBC Rulemaking Notice, Supplementary Information, at 4.

⁷ PennFuture will not reiterate in its comments, but incorporates by reference, the risks identified by the Commission in the Supplementary Information.

⁸ EPA, *Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States*, EPA-600-R-16-236FA (December 2016), available through EPA’s website at <https://cfpub.epa.gov/ncea/hfstudy/recordisplay.cfm?deid=332990>.

⁹ NYSDEC, *FSGEIS on the Oil, Gas and Solution Mining Regulatory Program, Regulatory Program for Horizontal Drilling and High-Volume Hydraulic Fracturing to Develop the Marcellus Shale and Other Low-Permeability Gas Reserves – Findings Statement* (June 2015), available at http://www.dec.ny.gov/docs/materials_minerals_pdf/findingstatehvhf62015.pdf.

¹⁰ See Maryland S.B. 740, Fiscal and Policy Note, available at http://mgaleg.maryland.gov/2017RS/fnotes/bil_0000/sb0740.pdf.

serious environmental and human health risks from fracking operations.¹¹ Based on all of this information, it is clear that fracking poses a substantial risk of harm to the water resources of the Delaware River Basin.

Under Section 3.8 of the Delaware River Basin Compact¹² (“Compact”), the Commission cannot approve “projects having a substantial effect on the water resources of the basin” that it finds would “substantially impair or conflict with the comprehensive plan.”¹³ The Comprehensive Plan¹⁴ comprises the “immediate and long-range development and use of the water resources of the Basin”¹⁵ and includes, *inter alia*, the policies of the Commission. These policies contained in the Delaware River Basin Water Code¹⁶ (“DRBC Water Code”) include “conservation, development, and utilization of Delaware River water resources” and “water quality standards for the Delaware River Basin.” Thus, the Commission has the authority to regulate projects that would conflict with the conservation and water utilization policies of the Commission or which would impair the water quality of the Basin’s resources.

The US District Court for the Middle District of Pennsylvania last year confirmed the Commission’s authority to regulate fracking activities under Section 3.8 of the Compact because such activities are clearly a “project” as defined in Sections 1.2(g) and 1.2(i) of the Compact. Although this ruling has been appealed to the Third Circuit Court of Appeals, PennFuture is confident that the Middle District’s determination will be upheld.

The Commission Should Strengthen Its Draft Regulations to Ensure the Basin Is Protected from Fracking Harms

Although PennFuture supports the proposed prohibition of fracking contained in 18 CFR § 440.3(b), so as to leave no doubt, the Commission should

¹¹ Already two of the Basin states, New York and Maryland, have banned fracking within their borders, citing these immense risks as main factors for the imposition of the fracking bans.

¹² Delaware River Basin Compact (1961, reprinted 2009), *available at* <http://www.state.nj.us/drbc/library/documents/compact.pdf>.

¹³ Compact, § 3.8; 18 CFR § 401.32.

¹⁴ DRBC, Comprehensive Plan (July 2001), *available at* http://www.state.nj.us/drbc/library/documents/comprehensive_plan.pdf.

¹⁵ Compact, § 13.1.

¹⁶ DRBC Water Code, 18 CFR Part 410 (2013), *available at* <http://www.nj.gov/drbc/library/documents/watercode.pdf>.

consider the following change to ensure that the Basin’s resources are ultimately protected (notwithstanding the proposed fracking prohibition): amend its regulations at 18 CFR § 401.35(b) to include fracking activities (as defined in 18 CFR 440.2) as a project that will or may have a substantial effect on Basin water resources and for which review under Section 3.8 of the Compact is required.¹⁷

The Commission should not rely on Basin states’ review and permitting systems to protect the Basin resources for which the Commission is uniquely situated to protect. Not only may the states’ regulations and resources be inadequate to protect Basin resources from the risks of fracking, but because the Delaware spans 4 states, the Commission must ensure a cohesive regulatory scheme regardless of where a fracking operation is located. To allow otherwise would fly in the face of the goal for the establishment of the Commission over 50 years ago.

In all, PennFuture strongly supports the proposed prohibition of fracking activities in the Basin and encourages the Commission to adopt this section of the Draft Regulations. Such prohibition is necessary to protect the Delaware River Basin – and the 15 million people who rely on it for drinking water – from the known risks of fracking.

II. The Commission Should Reject the Proposed Regulations Regarding the Exportation of Basin Source Water for Fracking and Should Require DRBC Staff to Develop Stronger Regulations That Will Protect Basin Resources

The Draft Regulations allow for, and propose to regulate, the exportation of clean Delaware River water for use in fracking operations outside the Basin. PennFuture supports the requirement in the Draft Regulations that the transfer of *any amount* of surface or groundwater, treated wastewater, or mine drainage for fracking outside of the basin must be approved by DRBC (eliminating the threshold for DRBC review of 100,000 gallons of water per day for these activities).¹⁸ While PennFuture supports the Draft Regulation’s mandate of DRBC review for water

¹⁷ Accordingly, the Commission should remove the proposed language of 18 CFR § 401.35(a)(19) (which states that fracking, if there is a state-level review or permit system in effect, is *not* a project which may have a substantial effect on the water resources of the Basin).

¹⁸ See 18 CFR §§ 440.4 and 401.35.

exportation for fracking, regardless of the volume exported, the Draft Regulations must be strengthened to ensure both short- and long-term protections of water quantity and quality in the Basin.

Modern fracking uses massive amounts of water – 5-10 million gallons per well on average with upwards of 10-20 million gallons per well becoming more frequent. Regardless of the amount of water that is recouped in the process, this water use is a total loss to the source. Allowing water to be exported from the Basin for fracking would result in potentially *hundreds of millions* of gallons of water being permanently removed from the Basin’s hydrologic cycle, impeding the natural water cycle and compounding the impacts of the initial loss.

Additionally, surface water withdrawals have the potential to significantly impact downstream groundwater resources, especially if seasonal and weather-related impacts (e.g., drought or springtime high flows) are taken into account. And these fluxes in water quantity of the Delaware River will only be exacerbated as climate change impacts our weather patterns and available water resources. Moreover, this downstream impact can affect wetlands, aquifers, wells, and even industry that all require reliable amounts of water to function properly.

As the Draft Regulations Rulemaking Notice states, the DRBC Water Code already acknowledges that Basin water resources are in a perilous position and “discourage[s]” exportation of Basin water:¹⁹

The waters of the Delaware River Basin are limited in quantity and the Basin is frequently subject to drought warnings and drought declarations due to limited water supply storage and streamflow during dry periods. Therefore, it shall be the policy of the Commission to discourage the exportation of water from the Delaware River Basin.

¹⁹ Rulemaking Notice, at 12 (citing DRBC Water Code, § 2.30.2). Note that it is unclear what “discourage” means in the Commission’s regulations, and such language should be appropriately codified to ensure that the water quantity of the Basin is not depleted.

Yet despite this situation and the fact that fracking will permanently remove tens of millions of gallons of water *per well*, the Draft Regulations do not change or supplement the factors the Commission must consider when reviewing an application for water transfer outside of the Basin;²⁰ the consideration is the same for all uses. The Commission should amend its Draft Regulations to provide for specific regulations, considerations, and prohibitions, if necessary, regarding the exportation of water for fracking that accounts for the vast amounts of water exported. For example, the Draft Regulations should include a presumption that water exportation for fracking will impair the water resources of the Basin; an applicant then has the burden to prove to the Commission that it will not. The Commission should also impose a limitation on the maximum amount of water that can be exported by any single applicant and/or for any single project. While these are just two examples, it is clear that, given the massive amounts of water used in fracking, the Draft Regulations must do more to actually “discourage” such exportation and protect the Basin’s water resources.

III. The Commission Should Reject the Proposed Regulations Regarding Fracking Wastewater and Should Require DRBC Staff to Develop Stronger Regulations That Will Protect Basin Resources

The Draft Regulations allow for, and propose to regulate, the transfer, storage, treatment, and disposal of fracking wastewater within the Basin. Allowing for some of the most toxic and concerning by-products to be stored, treated, and disposed of within the Basin seems contrary to the prohibition on fracking activities within the Basin that is proposed by the Draft Regulations. Indeed, the Supplementary Information details the immense risks posed by the handling and disposal of fracking wastewater.²¹

Similar to the proposed regulations for the exportation of Basin water (noted above), the Commission has a policy to “discourage” the importation of wastewater:²²

²⁰ See DRBC Water Code, § 2.30.4.

²¹ Supplementary Information, at 8-10.

²² Rulemaking Notice, at 12 (citing DRBC Water Code, § 2.30.2).

[T]he basin waters have limited assimilative capacity and limited capacity to accept conservative substances without significant impacts. Accordingly, it also shall be the policy of the Commission to discourage the importation of wastewater into the Delaware River Basin that would significantly reduce the assimilative capacity of the receiving stream on the basis that the ability of Delaware River Basin streams to accept wastewater discharges should be reserved for users within the basin.

The Draft Regulations propose a number of requirements to help ensure that the Basin resources are protected from the risks associated with fracking wastewater – and PennFuture strongly supports this effort – but in many cases, the Draft Regulations should be revised to ensure stronger protections to fully meet the Commission’s duty to protect the Basin resources.

The Proposed Treatability Studies Are a Necessary Requirement, but the Draft Regulations Should Cover Additional “Pollutants of Concern”

PennFuture supports the Draft Regulations requirement to conduct treatability studies for the treatment of frack wastewater at centralized wastewater treatment facilities (“CWT”) that plan to discharge to the Basin.²³ These studies are to confirm that the Pollutants of Concern are addressed, using EPA Tables from the agency’s technical document on oil and gas waste discharges to define the Pollutants of Concern.²⁴

Fracking wastewater contains more pollutants than the 78 for which analyses must be conducted. For instance, the New York State Department of Environmental Conservation listed 154 parameters in frack wastewater for which it sampled from the Marcellus formation in Pennsylvania and West Virginia.²⁵ Over

²³ We are also supportive of the Draft Regulation’s requirement that fracking wastewater can only be processed through CWTs.

²⁴ See EPA Technical Development Document for the Effluent Limitations Guidelines and Standards for the Oil and Gas Extraction Point Source Category (2016), Tables C -11, C-13, C-15, C-17, C-19.

²⁵ See New York State Department of Environmental Conservation, Revised Draft Supplemental Generic Environmental Impact Statement on the Oil, Gas, and Solution Mining Regulatory Program, Well Permit Issuance for Horizontal Drilling and High-Volume Hydraulic Fracturing to Develop the Marcellus Shale and other Low-Permeability Gas Reservoirs, September 2011, Table 5.9.

1000 additives are in the fluids used to frack wells today;²⁶ many are carried into the frack wastewater produced by the well. Many of these frack fluids are toxic and/or have harmful health effects for humans, fish and wildlife, and plant life. These concerns do not account for chemical constituents about which we are unaware. Additionally, the character of gas well wastewater varies, depending on the formation from which it was produced and the project sponsor that produced it, future innovations may result in wastewater with categorically different characteristics than now known.

For all these reasons the Commission should cover additional “pollutants of concern” in its treatability studies, should institute a policy to monitor the character of the fracking wastewater that any CWT may accept, and institute a policy to ensure that treatability study requirements are updated on a regular basis.

The In-Stream Baseline Study Is a Necessary Requirement, but the Commission Must Develop Additional Testing Requirements

PennFuture also supports the requirement that an in-stream baseline study first be undertaken and that the proposed discharge must meet stringent water quality limitations (e.g., “no measurable change” within the Special Protection Waters) in order to be approved by the Commission. However, we are concerned that the Commission has not yet, for example, developed the analytical methods, method detection limits, and quantification limits that a discharger must use to define the background concentration of a pollutant. Thus, there appears to be no certainty about the accuracy or reliability of such baseline studies. Consequently, the Commission should develop this and other necessary information and methods before it finalizes its fracking wastewater regulations.

²⁶ See EPA, Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States”, EPA-600-R-16-236Fa, December 2016 www.epa.gov/hfstudy; New York State Department of Environmental Conservation, Revised Draft Supplemental Generic Environmental Impact Statement on the Oil, Gas, and Solution Mining Regulatory Program, Well Permit Issuance for Horizontal

The Commission Should Not Allow the Storage of Fracking Wastewater within the Basin

PennFuture opposes the Draft Regulations proposed allowance of storage of wastewater, especially given DRBC's current practice of allowing storage of untreated wastewater in lagoons. The risk of leak or other migration of this highly toxic wastewater is too great to be allowed in the Basin.

The Commission Should Not Allow the Injection of Fracking Wastewater within the Basin

Finally, the Draft Regulations should prohibit the injection of fracking wastewater within the Basin. Injection of wastewater does not "treat" waste or remove contaminants; it simply moves the risk of migration (through leaks or naturally occurring fractures) from the surface (where it can be monitored) to deep underground. The potential harm to the Basin's groundwater, aquifers, and even downstream surface waters is simply too great to allow this relatively new practice to occur within the Basin.

IV. The Draft Regulations Must Include Monitoring, Inspection, and Enforcement Mechanisms Which Are Currently Absent

Noticeably lacking from the Draft Regulations is a requirement for additional monitoring, inspecting, and enforcement mechanisms for both the exportation of water and importation of fracking wastewater. For example, the Draft Regulations do not require monitoring and reporting on numeric effluent limits from discharges from the CWTs treating fracking wastewater; the Draft Regulations only state that such requirements "may" be included in a docket. Additionally, the Draft Regulations do not provide enforcement mechanisms to ensure that the requirements of the regulations are followed once a docket is issued. Given the risks associated with both of these practices (as highlighted above), the Commission would be remiss if it failed to ensure that its regulations were properly followed and that violators were punished. As mentioned above, the Commission cannot rely on resource-limited states for such post-regulatory protections.

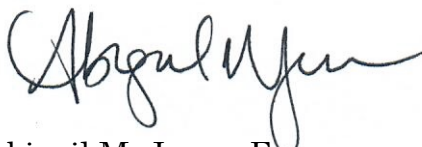
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In conclusion, the Delaware River is one of the most historic and unique water resources in the country. We commend the Commission on joining together with a growing number of Basin states (including New York and Maryland) in its determination that the risks from fracking are simply too great to be allowed within the Delaware River Basin. In order to ensure that the work of the Commission over the past 50 years to restore and protect the Delaware is not jeopardized, PennFuture urges the Commission to do the following:

- Adopt the portions of the Draft Regulations that prohibit fracking within the Basin;
- Reject the portions of the Draft Regulations related to water use for fracking until the regulations are strengthened to ensure protection of Basin resources; and
- Reject the portions of the Draft Regulations related to the management of produced water from fracking until the regulations are strengthened to ensure protection of Basin resources.

Finally, should the Commission reject any portion(s) of the Draft Regulations, it must not allow any such activities – whether fracking, water exportation for fracking, or storage, treatment, and disposal of fracking wastewater – to occur within the Basin unless and until new, more stringent regulations are adopted.

Respectfully submitted,



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