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COMMENT MEMORANDUM

TO: Delaware River Basin Commission (via http://dockets.drbc.commentinput.com)

FROM: Robert Kecskes

RE: Proposed Draft Regulations Addressing Hydraulic Fracturing and Additional Clarifying Amendments

DATE: March 24, 2018

Dear Delaware River Basin Commissioners:
Kindly accept my comments on the Delaware River Basin Commission's (the "DRBC") Proposed Draft Regulations Addressing Hydraulic Fracturing and Additional Clarifying Amendments (Notice 113017), specifically the proposed provision related to water use for hydraulic fracturing ("fracking"). If implemented, the regulations would discourage the exportation of water from the Delaware River basin (the "basin") at any rate or volume for utilization in fracking outside the basin.

General Comments

I make the following comments on the proposed regulations:

1. Even though the proposed DRBC regulations discourage the exportation of Delaware basin water, they do not out-and-out ban them. The fracking industry in the adjacent Susquehanna River basin is thus likely to vigorously place substantial political and legal pressures on the DRBC to allow basin water to be exported into the Susquehanna basin, and may even prevail in totally overturning this proposed provision in court. I rationalize this potential due to these following:

    - First, increased demand for natural gas has reduced water availability in the eastern headwater streams of the Susquehanna basin. Demand for natural gas in the Susquehanna basin has significantly increased over the last few years and is expected to continue growing in the future. There are now almost 6,000 fracking wells in the Susquehanna basin, and thousands more can be anticipated. However, there is only so much water in that basin, especially in the smaller headwater streams of the eastern Susquehanna basin adjacent to the vulnerable headwater streams in the western Delaware basin, primarily in Pennsylvania. Many fracking water withdrawal approvals have been granted over the last decade in the eastern headwaters of the Susquehanna basin in Pennsylvania, resulting in reduced availability for future approvals.

Consequently, the industry will likely expend additional pressure on the DRBC to permit the exportation from the western headwaters of the Delaware basin.

- Second, because the surface and ground water withdrawal permit limits that have been implemented by the Susquehanna River Basin Commission (SRBC) are much more stringent than those of the DRBC, in conjunction with the substantial increase in fracking withdrawals that may have reduced water availability in the eastern headwaters of the Susquehanna basin, the fracking industry will probably seek remedies to circumvent the DRBC exportation provision. Withdrawals can be substantially larger and available for most of the year in the Delaware basin as compared to the Susquehanna basin. The DRBC utilizes a single year-round pass-by flow of the Q7-10, which is a flow that can be expected during a severe drought. The DRBC also does not appear to limit the withdrawal amount to any specific percentage of the Q7-10 passby flow protection threshold. This translates to withdrawals potentially removing large volumes of water from a stream when the Q7-10 is being maintained. As such, artificially low drought-like flows may develop for extended periods during dry weather conditions, especially if there are other substantial withdrawals in the watershed (i.e., the withdrawal entities are all vying for the water that is occurring just in excess of the Q7-10). This approach conflicts with the maintenance of seasonal natural flow variability tenet that most aquatic resource experts have concluded is necessary to protect a stream's ecology. On the other hand, the SRBC has determined that a proposed surface or ground water withdrawal will be regulated by either monthly or seasonal passby flows to ensure that natural streamflow patterns are maintained, and that drought flows are not exacerbated. Furthermore, proposed withdrawals are comprehensively assessed to confirm that they either individually or cumulatively avoid adverse ecological impacts and do not negatively affect other users within a watershed. Due to these substantially more rigorous SRBC withdrawal requisites that reduce the availability of water in the eastern Susquehanna basin, it is believed that fracking entities will be pursuing western Delaware basin supplies, even though the latter will be discouraged by the proposed DRBC regulations.

- Third, the "arbitrary and capricious" test where a court can set aside an agency's regulatory action is quite likely to be drawn on by the fracking industry's attorneys. The Administrative Procedure Act prescribes that courts may invalidate an agency's action if it is found to be arbitrary and/or capricious, an abuse of discretion, or otherwise not in accordance with law. Courts may also overturn agency regulations if they find the underlying rationale or factual assertions to be unreasonable. Further, courts may reverse regulations if the agency has relied on factors that enabling legislation has not intended it to consider, or the agency's interpretation of a statute raises serious constitutional concerns. In this case, the enabling legislation for the DRBC proposed regulations is the Delaware River Basin Compact of 1961. This legislation did not unequivocally discourage water exportation from the Delaware basin; rather, the statue called for the planning and conservation of the basin's water resources and the establishment of standards to conserve these resources. The subsequent DRBC Comprehensive Plan and regulations took the legislative intent to the next step and discouraged exports. In consideration of the limited water availability in the Susquehanna basin due to fracking withdrawal needs, in conjunction with the stringent

withdrawal limits that have been implemented by the SRBC, it is conceivable that the fracking industry will focus on this inconsistency and make a case that exports should be allowed if they meet the same standards as withdrawals used within the Delaware basin. More specifically, the proposed regulation would discourage fracking exports of any amount, while the DRBC would continue to regulate in-basin withdrawals of 0.1 MGD or more, deeming the latter to having no substantial effect on the basin's water resources. The DRBC should be prepared to be challenged by the fracking industry that the proposed regulations may be arbitrary and capricious.

- Fourth, because of the large economic benefits associated with fracking, and the consequent large political contributions that can be made available, there is the potential for future state governors and their administrations in the Delaware basin to ease the exportation restraint provision in the proposed regulation, or even entirely remove this provision at a later date. If water exportation was totally prohibited in the upcoming DRBC regulations, however, these possibilities are less likely in consideration of the substantial negative public opposition it would probably generate.

2. The primary regulatory device that the DRBC plans to employ to discourage the exportation of water from the Delaware basin is to make all proposed exports of water for fracking subject to the requirement that alternatives involving no exportation be analyzed and that the water resource, economic and social impacts of the proposal be evaluated. However, it appears that it would not be substantially difficult to win approval on a case-by-case basis to thwart the ban, especially by expert consultants hired by the well-financed fracking industry. Applicants can readily show the difficulty of developing a water supply in the Susquehanna basin as a result of the stringent SRBC withdrawal limits; water resource impacts of each alternative available including the "no project" alternative can be readily demonstrated if the applicant selects a withdrawal site that meets the DRBC's relatively permissive Q7-10 passby flow; the water export fees would assist in offsetting the costs associated with administering the DRBC program; and the export volumes can be demonstrated in a well-funded, well-prepared plan developed by the fracking industry to show that exports would not be detrimental to the Delaware basin.

3. Because of the above-described vulnerabilities of the proposed DRBC export discouragement provision, it appears quite possible that it would eventually be relaxed or even over-turned, and substantial exportations of water from the Delaware basin to the Susquehanna basin would be allowed. The current users of the Delaware basin will be significantly impacted if the proposed DRBC fracking water exportation restraint provision is eased in the future. This is because water restrictions of various levels are implemented when storage in the reservoirs in the upper Delaware River flow decline to specific levels. These reservoir levels are primarily driven by water supply demand from New York City and reservoir releases to meet the minimum Delaware River flow requirements at Montague and Trenton. If these two flow requirements are not met, the Delaware estuary salt front can advance and threaten major public water supplies in Pennsylvania and New Jersey. The exportation of Delaware basin water to the Susquehanna basin will accelerate drought declarations as the flow requirements prematurely decline as the result of fracking withdrawal exports and more water must be released from the reservoirs. Between 1980 and 2010, there have been twelve drought

warnings in the basin (or on average every two and one-half years). If conditions worsen, mandatory water restrictions are required. The frequency of these events will increase if the proposed DRBC discouragement provision is relaxed or over-turned.

4. In addition, the Delaware basin's water quality would suffer if the proposed fracking export deterrent is exploited or legally invalidated, especially the no measurable change to natural water quality in Special Protection Waters requirement. As noted above, numerous fracking withdrawal exports from the Delaware basin to the Susquehanna basin would result in drought-like streamflows for extended periods during dry weather conditions. This obviously would result in measurable changes to natural water quality and, in conjunction with the reduced natural streamflows, impair the basin's aquatic resources as well as potentially degrade downstream potable surface water supplies. This phenomenon would be further exacerbated during severe drought in the event that New York City could not meet its reservoir release requirements.

Recommendations

Based on the above comments, the following recommendations are offered:

It is recommended that the DRBC adopt a two-prong approach in its proposed regulations. A total prohibition of the exportation of water from the basin at any rate or volume for utilization in fracking outside the basin should be included in the regulation, in concert with the adoption of ecologically-protective passby flow/withdrawal limits for all new withdrawals that are similar to the limits currently in place in the Susquehanna basin.

The logic behind this recommendation is relatively simple. The adoption of more restrictive withdrawal limits would greatly reduce the attraction by the fracking industry in the Susquehanna basin to seek imports from the Delaware basin. They would face the same restraints in both basins. It would also reduce the potential for the industry to use legal arguments to overturn the prohibition since they would be subject to the same restrictive withdrawal limits in either basin. And, as described above, history tells us that government is typically less likely to totally lift an existing ban that the public has grown used to than to slowly "whittle away" at a regulatory provision that serves to only discourage an activity. Last, it is my understanding that the DRBC is considering adopting water withdrawal limits that are more ecologically protective. Adoption of these withdrawal restraints at this time is a "win-win" situation for both the natural resources of the Delaware basin and the existing users of these resources.

I appreciate the opportunity to comment on the proposed regulations. Please feel free to contact me if you have any questions. I have also enclosed my resume for your information.

Thank you.

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Freelance Water Resource Consultant

Comprehensive knowledge of water resources and human impacts on water resources. Provide guidance to environmental organizations, grass root groups, and local governments on impacts of proposed projects on water and ecological resources that may result from surface and ground water withdrawals, wastewater discharges, and residential, commercial and industrial activities.

Areas of Expertise

Streamflow Depletion from Wells and Surface Water Intakes - Streamflow Depletion Impacts on Natural Resources - Saltwater Intrusion Effects from Wells - Nonpoint Source Impacts from Development

Professional Experience

NJ Department of Environmental Protection (Water Supply Planning Section) - Trenton, New Jersey

Section Chief (1/1987 – 1/2011)

Challenged with the development of two statewide water supply master plans, numerous regional water supply plans, conservation plans, drinking water protection initiatives, and regulations that ensure water supply is adequately considered and balanced when watersheds are being urbanized. Advanced watershed management plans and efforts that ensure that there are adequate in-stream flows for other users, water quality is protected, and natural resources are maintained. Collaborated with federal, state, county, municipal, water company, and wastewater officials to ensure that water supplies will be ample in quantity and quality. Developed mid-term and long-range water demand projections.

Selected Contributions

- Primary author of 1996 and 2017 (draft) NJ Statewide Water Supply Plans.
- Co-author of Estimating the Safe Yield of Reservoir Systems.
- Primary author of Sustainable Water Supplies for Cape May County.
- Co-author of concept to develop water budgets for watersheds of New Jersey.
- Co-author of concept to develop watershed management plans for New Jersey.
- Project manager overseeing regional water supply plans for the Raritan Basin, Critical Water Supply Area One and Critical Water Supply Area Two.
- Co-author of Source Water Protection in New Jersey.
- Author of scope of work for water supply plan for Passaic and Hackensack watersheds.

Robert A. Kecskes

NJ Department of Environmental Protection (Construction Grants) - Trenton, New Jersey
Project Specialist (2/1981 – 12/1986)
Project manager for the planning, design and construction of wastewater treatment plants and sludge facilities. Played a leading role in closing landfills to accepting wastewater sludge by developing sludge treatment and disposal facilities, including incinerators. Served as Statewide Coordinator for the Small Communities Program that assisted municipalities with populations of less than 10,000 that were experiencing septic system and small wastewater treatment plant problems. Co-authored the New Jersey septic system regulations (Chapter 199).

NJ Department of Environmental Protection (Bureau of Waste Load Allocation) - Trenton, New Jersey
Principal Environmental Specialist (1/1980 – 1/1981)
Responsible for conducting ground water monitoring, biological assessment, water quality standards, and establishment of effluent limitations for sewage treatment plants pursuant to the 1972 Federal Pollution Control Act.

NJ Department of Environmental Protection (Water Quality Planning) - Trenton, New Jersey
Senior Environmental Specialist (10/1977 – 12/1980)
Overall responsibility for the development of major sections of the State's Water Quality Management (Section 208) Plan for the Passaic and Hackensack River Basins. Work tasks included water quality analysis, point and nonpoint source control and management, ground water quality assessment, and implementation strategy.

NJ Department of Environmental Protection (Floodplain Management) - Trenton, New Jersey
Senior Environmental Specialist (12/1975 – 11/1980)
Responsible for enforcement of New Jersey's floodplain laws and environmental assessment of projects in floodplains. Also responsible for federal disaster assistance during floods and hurricanes.

Education

Bachelor of Arts in Earth Science
College of New Jersey, Ewing, New Jersey (1973)

36 Credits of Graduate Studies – Water Resources
Rutgers University, New Brunswick, New Jersey (1977 – 1980)