

## **Week 7 - Watershed Wednesdays – Water – Don't Waste on Fracking!**

The DRBC's proposed fracking regulations could open the Delaware River Basin to the removal and transfer of freshwater out of the basin, known as an "inter-basin transfer," for use in fracking operations elsewhere, pending the Commission's approval. This would be a devastating mistake with impacts across the region.

There are many documented harms of inter-basin transfers, including:

- **Reduced flow rates in the donor basin:** Decreased supply in the donor basin can result in changes to a waterbody's natural flow patterns, with impacts to native vegetation and aquatic habitats, including in wetlands. This loss in biodiversity can expose a waterbody to an influx of invasive species, which can further harm local habitats.[6] The Delaware River Basin is a sanctuary to rare and endemic species of plants and animals including bears, bald eagles, native trout, freshwater mussels and eels, and endangered timber rattlesnakes, all of which would be threatened by shifts in the watershed's freshwater flow patterns.
- **Reduced ability of the donor water body to assimilate pollutants:** A waterbody with less supply has a decreased ability to dilute pollutants and could harm aquatic species due to heightened toxic exposure.
- **Unsustainable development of a limited resource:** Inter-basin transfers put donor waterbodies that people depend on for drinking water at risk and can enable development in regions that do not have readily available water. The Delaware River Basin is the drinking water source for over 17 million Americans, including residents of Philadelphia and New York City. Removing water from the basin would threaten the region's water security.

March 14, 2018

Thank you for commenting on the DRBC's proposed rules on fracking rules!

We HIGHLY encourage you to personalize your comments, so if you've got a few minutes and are interested in additional information and crafting your own comment, read on. There's also a sample letter below to get you started.

To that end, below is more info on this week's topic: the dangers of inter-basin transfers of water for the purpose of fracking where it is permitted. We cannot allow the precious water resources of the basin to be used for fracking in neighboring communities!

Thank you again!

---

## Sample Letter

To the Delaware River Basin Commissioners -

According to the Delaware River Basin Commission Water Code, “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.”<sup>1</sup>

Despite this statement, the DRBC’s proposed fracking regulations could open the Delaware River Basin to the removal and transfer of freshwater out of the basin, known as an “inter-basin transfer,” for use in fracking operations elsewhere, pending the Commission’s approval. This would be a devastating mistake with impacts across the region.

Fracking is a highly water-intensive process, requiring between 4 and 11 million gallons of water per well in the Marcellus region.<sup>2</sup> According to the United States Environmental Protection Agency, 70 to 90 percent of water used in fracking is permanently removed from the water cycle.<sup>3</sup> In the nearby Susquehanna River Basin, approximately 96 percent of water withdrawn by the gas industry is consumptive.<sup>4</sup> Removing water for the purpose of fracking where it is permitted would result in this precious resource being permanently removed from the Delaware River Basin.

Should the Delaware River Basin be opened to inter-basin transfers of freshwater for fracking to take place elsewhere, the Commission would also be contradicting its stated mission of “adopting and implementing policies to manage the Basin’s water resources in an integrated, planned fashion.”<sup>5</sup>

There are many documented harms of inter-basin transfers, including:

- **Reduced flow rates in the donor basin:** Decreased supply in the donor basin can result in changes to a waterbody’s natural flow patterns, with impacts to native

---

<sup>1</sup> Delaware River Basin Water Code, § 2.30.2. <http://www.nj.gov/drbc/library/documents/watercode.pdf>.

<sup>2</sup> Susquehanna River Basin Commission, Natural Gas Well Development in the Susquehanna River Basin, <http://www.srbc.net/programs/docs/NaturalGasInfoSheetJan2013.PDF>.

<sup>3</sup> United States Environmental Protection Agency, Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States, Dec. 2016 (EPA-600-R-16-236Fa).

<sup>4</sup> Water Use Associated with Natural Gas Shale Development: An Assessment of Activities Managed by the Susquehanna River Basin Commission [http://www.srbc.net/pubinfo/techdocs/NaturalGasReport/docs/SRBC\\_Full\\_Gas\\_Report\\_fs306397v1\\_2016\\_0408.pdf](http://www.srbc.net/pubinfo/techdocs/NaturalGasReport/docs/SRBC_Full_Gas_Report_fs306397v1_2016_0408.pdf), p. 38.

<sup>5</sup> Delaware River Basin Commission Vision, [http://www.state.nj.us/drbc/library/documents/DRBC\\_vision-mission.pdf](http://www.state.nj.us/drbc/library/documents/DRBC_vision-mission.pdf).

vegetation and aquatic habitats, including in wetlands. This loss in biodiversity can expose a waterbody to an influx of invasive species, which can further harm local habitats.<sup>6</sup> The Delaware River Basin is a sanctuary to rare and endemic species of plants and animals including bears, bald eagles, native trout, freshwater mussels and eels, and endangered timber rattlesnakes, all of which would be threatened by shifts in the watershed's freshwater flow patterns.

- **Reduced ability of the donor water body to assimilate pollutants:** A waterbody with less supply has a decreased ability to dilute pollutants and could harm aquatic species due to heightened toxic exposure.<sup>7</sup>
- **Unsustainable development of a limited resource:** Inter-basin transfers put donor waterbodies that people depend on for drinking water at risk and can enable development in regions that do not have readily available water. The Delaware River Basin is the drinking water source for over 17 million Americans, including residents of Philadelphia and New York City. Removing water from the basin would threaten the region's water security.

The DRBC's own rulemaking notice on the proposed fracking regulations affirms these impacts by stating that "withdrawals from surface and groundwater in the amounts required for [fracking] may adversely affect aquatic ecosystems and river channel and riparian resources downstream, including wetlands, and may diminish the quantity of water stored in an aquifer or a stream's capacity to assimilate pollutants."<sup>8</sup>

Each of these negative impacts is further compounded by the threat of anthropogenic climate change, which in the Northeastern United States is projected to result in unpredictable precipitation and increased temperatures, resulting in loss of snowpack, prolonged droughts and sea-level rise.<sup>9</sup> The Northeast is the fastest-warming region in the contiguous United States and is heating up at a rate 50 percent faster than the global average.<sup>10</sup> Sea-level rise, in particular, presents unique risks to waterways with reduced freshwater supply.

In the Delaware River Basin, the "salt line," the invisible zone dividing freshwater and seawater, fluctuates based upon tidal activity and upstream reservoir water releases. While the salt line typically hovers around Wilmington, Delaware, it has pushed to just south of Philadelphia during drought conditions, and has reached within eight miles of the Philadelphia drinking water

---

<sup>6</sup> World Wildlife Fund, "Pipedreams? Interbasin water transfers and water shortages," [www.wwf.or.jp/activities/lib/pdf\\_freshwater/freshwater/pipedreams\\_27\\_june\\_2007\\_1.pdf](http://www.wwf.or.jp/activities/lib/pdf_freshwater/freshwater/pipedreams_27_june_2007_1.pdf).

<sup>7</sup> *Proceedings of the 2007 Georgia Water Resources Conference*, held March 27–29, 2007, at the University of Georgia. <http://www.gwri.gatech.edu/sites/default/files/files/docs/2007/5.2.3.pdf>.

<sup>8</sup> Delaware River Basin Commission, Administrative Manual and Special Regulations Regarding Natural Gas Development Activities; <http://www.nj.gov/drbc/library/documents/HydraulicFracturing/RulemakingNotice113017.pdf>.

<sup>9</sup> Northeast, National Climate Assessment, <https://nca2014.globalchange.gov/highlights/regions/northeast>

<sup>10</sup> Consequences of Global Warming of 1.5 °C and 2 °C for Regional Temperature and Precipitation Changes in the Contiguous United States, Karmalkar AV, Bradley RS (2017) Consequences of Global Warming of 1.5 °C and 2 °C for Regional Temperature and Precipitation Changes in the Contiguous United States. PLOS ONE 12(1): e0168697. <https://doi.org/10.1371/journal.pone.0168697>

intake.<sup>11</sup> In a climate-disrupted future, as upstream supply of freshwater decreases due to decreased snow-melt in New York, and sea-levels increase, the salt line can be expected to move upstream.<sup>12</sup> Removing freshwater from upstream sources would increase the rate of intrusion of seawater from rising seas and impact drinking water intakes and infrastructure throughout the watershed.

The gas that would be extracted using Delaware River Basin water would only serve to increase the acceleration of greenhouse gas emissions that drive climate change.

Should the DRBC permit inter-basin transfers of water for fracking elsewhere, it would highlight a contradiction in how it views water management. The harms of fracking are well documented, and include health risks, industrialization of communities, climate change impacts, among others. The DRBC has acknowledged these risks in its rulemaking notice on the latest proposed fracking regulations. These risks do not only apply within the Delaware River Basin, but in other watersheds as well. For a donor basin to ban drilling, only to transfer water for this same practice in other locations where it is permitted is contradictory.

The Delaware River Basin Commission must provide the protections the Basin deserves and move forward with a full ban on fracking, inclusive of drilling, inter-basin transfers and the treatment, storage and discharge of fracking wastewater.

---

<sup>11</sup> Delaware River Basin Commission, Salt Line, <http://www.state.nj.us/drbc/hydrological/river/salt-line.html>

<sup>12</sup> Atlantic Climate Adaptation Solutions Association Saltwater Intrusion and Climate Change, [http://www.gov.pe.ca/photos/original/cle\\_WA1.pdf](http://www.gov.pe.ca/photos/original/cle_WA1.pdf)