



Pike County Conservation District

March 27, 2018

Steve Tambini, Executive Director and Commission Members
Delaware River Basin Commission
25 State Police Drive
P.O. Box 7360
West Trenton, NJ 08628-0360

RE: DRBC Proposed Special Regulations Regarding Natural Gas Development Activities

Dear Commission Members:

The Pike County Conservation District wishes to provide comments on the DRBC proposed Special Regulations regarding Natural Gas Development Activities within the Delaware River Basin.

As you know Pike County lies in the critical headwaters area of the basin. Our surface waters are largely *Special Protection Waters - high quality and exceptional value* designation as per PA Code Title 25, Chapter 93, Water Quality Standards. Our largely forested watersheds provide important protection to these high quality water resources. Our Conservation District plays a key role in conservation and monitoring of these water resources both surface and groundwater. Working with US Geological Survey over the past 10 years we have conducted some important baseline groundwater studies collecting data on Pike County's groundwater quality and quantity prior to any proposed gas drilling activities in the basin (visit: www.pikeconservation.org). Our surface water monitoring program conducted for over twenty years covers eighteen main watersheds in the county and looks at long-term trends of the water quality resource. Since 1956, our District has had a vested interest in conserving our water resources. As such Pike County Conservation District feels our expertise and our comments should be considered seriously as you propose to adopt regulations within the basin related to gas drilling activities.

Our comments are focused in several main areas:

Prohibition – The **Pike County Conservation Districts supports the Commission's proposal in Section 440.3(b) of the draft rule to prohibit high volume hydraulic fracturing in the Basin.** Prohibition of this activity will help to control pollution and impacts to the waters of the Basin thereby protecting the public's health and safety over the long-term as well as protecting the quality and quantity of the resource for use by future generations.

Consumptive Water Use

Pike County Conservation District's regular monthly monitoring of groundwater levels in 24 private wells located in various geologic formations and aquifers throughout Pike County in conjunction with USGS over the past ten years have shown areas of the county where groundwater is susceptible to decreased rainfall and droughty periods. Amplify this impact to our groundwater by removing large quantities of groundwater for use in the high volume hydraulic fracturing (HVHF) process and this poses a significant and critical water quantity issue for private landowners in the Basin as well as municipal, county and state entities managing the future of the resource. Your document highlights the "median volume of water used per well fracturing event in Pennsylvania between January 2011 and February 2013 was 4.18 million gallons," according to EPA, with 10 percent of the cases showing over "...6.6 million gallons per well." Again, this poses a significant potential impact to our Pike County groundwater resources over the long-term with no viable solution for addressing future water resource needs.

Pike County Conservation District is critically concerned about the potential impacts of water withdrawals for gas drilling activities on our groundwater resources in the headwaters of the watershed especially when the substantial quantities of water required for the gas well stimulation activities are proposed to be transported out of the basin for disposal. Our county's water resources (*Special Protection Waters*) have a critical water supply value, are an important scenic, ecological and recreational resource, and play an integral part in our regional economy. **We urge the DRBC to carefully consider the sensitivity of headwaters resource areas to water withdrawals and the potential cumulative impacts to surface and groundwater resources of this consumptive use.**

Cumulative Impacts to water resources based on disposal of chemical infused produced water from the industry and Transport outside the basin


DRBC documents again highlight information from EPA which reports that "1,084 chemicals ..(are) reported to have been added to hydraulic fracturing fluids between 2005 and 2013." The gas companies, in most cases, refuse to provide full disclosure of chemicals used in the process based on proprietary claims. According to EPA estimates, 70 to 90 percent of the water used in HVHF is permanently removed from the water cycle since this produced water cannot be effectively treated within wastewater treatment facilities within the Basin. Chemical waters produced in the process cannot be returned to the hydrologic cycle within our headwaters area and are transported outside the Basin – again reducing the headwater areas groundwater quantities. **Pike County Conservation District agrees with the DRBC statement that produced water poses a significant risk to the water resources of the Basin.**

The Pike County Conservation District believes consumptive water use, large volume transport of water outside the basin for treatment after use and cumulative impacts of chemical infused produced water within the basin are significant reasons for the DRBC to prohibit HVHF within the basin.

Water Exports for utilization in hydraulic fracturing activities outside the Basin

Again protection of the long term quality and quantity of our waters within the Pike County portion of the Delaware River Basin has always been our Conservation District goal and mission. The DRBC's role is similar on a much broader perspective. Management of good quality water and enough water for supplies for future use needs to be at the forefront of decisions like this which impact all residents and users of the waters in the basin. Allowance of water exports for use in other watersheds for gas drilling activities should also not be allowed even with the DRBC oversight. **For many of the reasons listed above but most predominantly for the continued supply of high quality drinking water for residents living in the Delaware River Watershed, the Pike County Conservation District encourages the DRBC to rethink the change in your long-standing policy of discouraging exportations of water out of the Basin.** Adequate water is perhaps one of the most critical management issues we will deal with as the future becomes present. Our decisions at this juncture need to be based on the protection of health and welfare of not only our current communities but also the communities of our children. Clean and plentiful water is a privilege which we all must recognize and address with our individual and joint actions.

Thank you for the opportunity to provide comments and input on your proposed rulemaking.
Should you have any questions, please contact me at 570-226-8220.

Sincerely, 
Sally J. Corrigan, Executive Director
Pike County Conservation District