

Damascus Citizens for Sustainability

We are for the prohibition of fracking, though all gas and oil drilling should be prohibited in the Delaware River Basin, not just high volume hydraulic fracturing. We are also against the import of any frack wastes, liquid or solid, 'treated' or not. Thirdly, we are against the export from the Delaware River Basin of water for fracking elsewhere - which the rest of this comment will look at.

Dunkard Creek on the southwestern PA border of West Virginia had a severe ecological disaster when all the creatures died in close to 40 miles of the stream. The culprit pointed to was a warm water saline environment algae, Golden algae that releases a toxin when it flourishes in a bloom and then the algae dies. SEE attached 3 page explanation. I also want to point out that there are 9 drinking water uptake facilities including Pittsburgh that were downstream from this disaster.

Yes, this is an extreme example, but real! The import of wastes from fracking can and does cause extreme responses to the very large load of salts, unknown chemicals, hydrocarbons, BETX, acids and more - including exotic and invasive plants and other organisms from the trucks and in the wastes. Prohibiting the import of frack waste to the Delaware River Basin is the only responsible choice.

Plus I want to point out that water to be taken away by drillers to frack gas wells outside of the Basin is a wasteful depletion of the water in the Delaware River basin, that ruins the quality of that water, removes it from the natural hydrologic cycle as it is contaminated and most of it buried deep underground, never to return to it to its source. This essentially stolen water enables neighboring regions to be fracked with the accompanying negative environmental and health impacts that no one should be subject to. And the draft rules propose this despite the DRBC's own statement that the Delaware River Basin waters are limited in quantity, are subject to drought and there are already large commitments to deliver water to millions each day.

Additionally to the above, I want to incorporate Mr. Steven Schwartz's comments on why water withdrawals should be prohibited.

Steven Schwartz Testimony

Written Testimony on proposed DRBC Fracking, water withdrawals and waste disposal regulations
3/20/18

- I support the proposed ban on unconventional gas drilling in the Delaware River watershed
- I oppose the proposed regulation allowing for the withdrawal and export of water from the Delaware River Watersheds to other watersheds for the purposes of natural gas exploration and production

• This use is depletive and consumptive, the water withdrawn leaves the system

The scale of the potential withdrawals is enormous. Industry analysts forecast 47,600 more Marcellus Shale oil and gas (O&G) wells may be drilled in Pennsylvania by 2045, fueling new natural gas power plants and petrochemical facilities in the state and beyond (https://www.cna.org/cna_files/pdf/Maps1_WellProjections.pdf). A buildout of this size will bring enormous impacts on air, land, and water and the communities proximate to these activities. Based on industry projections and current rates of consumption, the cumulative impact of the O&G buildout would require 583 billion gallons of fresh water depleted from the system

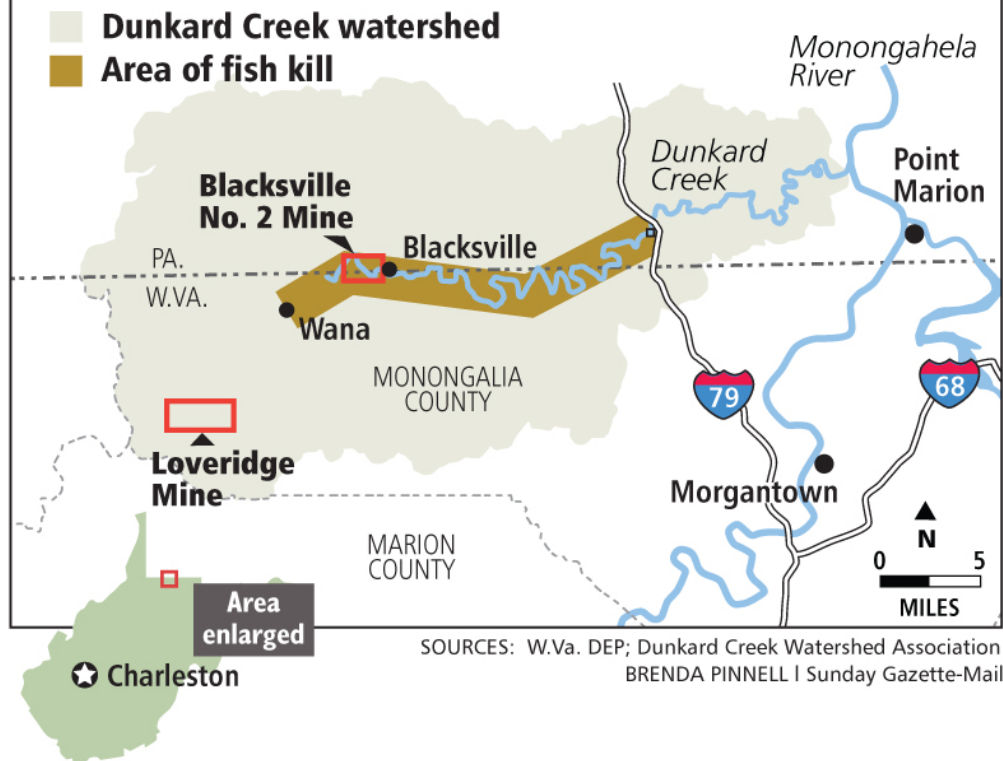
- This is precedent setting. Other than water withdrawals permitted by DRBC for food and beverage processing, there have been no other permitted exports of water for industrial use to my

knowledge. All water withdrawals for current industrial uses are for processes and activities within the basin.

- As the DRBC knows, mandated releases from the NYC reservoirs to meet downstream water needs may detrimentally affect river flows and temperatures critical to maintaining a healthy aquatic habitat and is a very important issue in the Upper Delaware. If water is withdrawn from the West Branch of the Delaware or the Upper Delaware there is no way to account for the loss of water and no requirement for NYC to make up the flows.
- There has been a speculative proposal on the table to build multiple pipelines along an old RR ROW in Northern Wayne County. One of the pipelines was proposed to transport water for distribution to drilling sites. If withdrawals of billions of gallons of water for fracking were to be allowed, a water extraction station could well be built at the site at which this ROW crosses the West Branch, disrupting the river and riparian zone at that location, and the loss of water from extractions at that point would seriously harm the downstream aquatic habitat which includes critical native trout spawning areas and rare and endangered species of fresh water mussels.
- The DRBC Water Code establishes "Policy of Protection and Preservation" that states "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."
- Water withdrawals from surface waterways have the potential to deplete downstream groundwater resources if set based on pass-by flows that do not take seasonality into account, including local benefits of high flows such as springtime flows or heavy precipitation events. Such a withdrawal may downstream cause some additional discharge from the aquifer to make up the loss of stream flow. This additional base flow will be contributed by shallow groundwater downstream of the withdrawal site, impacting aquifers. This presents the potential for loss of groundwater reserves that will discharge to the stressed waterway to maintain base flow that was lost to the withdrawal.
- The proposed application fees are capped at a withdrawal of 75 million gallons per month. There seems to be no financial disincentive for the amount of water to be withdrawn so there is incentive for an applicant to propose the maximum fee and withdraw far greater quantities of water.
- The applicant does not have to be the drilling company. A new company could be set up whose sole purpose is to withdraw, transport and sell the water to out-of-basin industrial users. There would be little or no accountability on the part of that company and little or no recourse for the prosecution of violations committed by that company.

Dunkard Creek fish kill

Two CONSOL Energy mines upstream from a huge Monongalia County fish kill have violated permit limits for years. State regulators keep giving them extensions of time to comply.

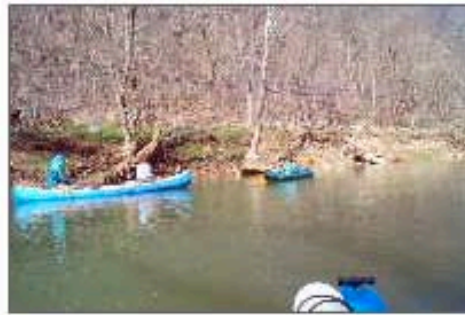
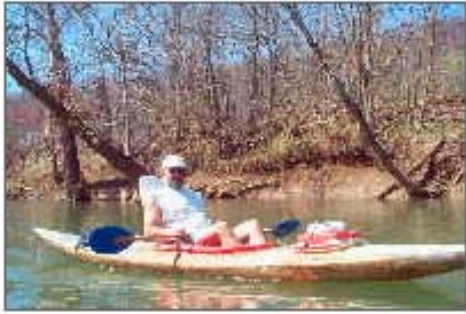


Spills of fuel and waste fluids, legal and illegal dumping, material handling “errors”, “operator errors”, casing “errors”, an overcapacity injection well, two interconnected coal mines with permits to dump into the Creek, workers in one of the mines being threatened by rising caustic waters, several gas wells fractured in the area, many unconventional (hydraulically fractured) gas wells north of Dunkard Creek with thousands of gallons of very salty waste fluids to dispose of all added up to transforming Dunkard Creek from a fresh water alive ecology to a dead saline (salty) sewer. 40 miles and 161 species - dead Thousands of fish, and all other creatures in the stream were killed.

The importation of an exotic species of algae from Texas, likely on drilling equipment added the final blow. Golden algae only lives in a saline environment and warm temperatures. It was summer and the frack waste turned the stream salty. The Golden algae bloomed and then as it died released the toxin that was the actual killing agent.

PICTURES - BEFORE and AFTER below

- BEFORE -



- AFTER -



September, 2009

Dunkard Creek is undergoing what has been called a total ecological disaster starting in September, with every living aquatic creature in the stream being killed. West Virginia and Muskie fishermen especially are mourning the loss of majestic muskie.

Photo from the Dunkard Creek Watershed Association, Inc. which is made up of volunteers, especially people who live in the 150,000-acre Dunkard Creek watershed