

TWO COMMENTS FROM DCS

first from

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I have spoken to this body many times, mostly about how gas and oil drilling, all the fracking processes and infrastructure, degrade health - human, regional environmental and global health - but today I will speak about economic health in relation to those same fossil fuel processes. In considering the Delaware River Basin's economic health which has been relatively unencumbered by drilling as a result of much struggle since 2008. In the Kauffman report, on the DRBC website, Kauffman adds up the value (in 2011) of the Basin - It's \$51 billion per year and natural capital of \$683 billion. - without drilling!

We must create the positive basis of certainty for economic stability in the DRB with a formal rigorous ban of gas and oil drilling, a ban of hydraulic fracturing, including a prohibition of transport and disposal of wastes from the industry in the Basin.

What would happen in the Delaware Basin if drilling was allowed? - a boom and a bust! with permanent damages as happens everywhere that allows itself to become a resource colony.

I have here a resolution from the Town of Tusten in Sullivan County, NY, asking the DRBC to enact a complete and permanent prohibition of hydraulic fracturing and shale gas development within the Delaware River Basin. And there are more municipalities formulating similar resolutions soon to be sent to the DRBC.

Why?

Because the possibility of drilling is a cloud over the economic well-being of the DRB. Who would buy into a drilling area to retire, raise a family or have a vacation home? That was the situation with a standstill in real estate and other factors in the DRB when the threat of drilling felt imminent.

Looking at what actually happened in Pennsylvania even with the abandonment of an ecotourism, hospitality initiative, called PA Wilds in order to embrace the

boom and bust of the gas industry. Over the ten years from 2007 to 2017 drilling industry jobs went up - and then down! WHILE leisure hospitality jobs went steadily up!.

through a few years of 'boom' to a bust in a typical boom-bust bell curve - leaving total drilling, mining and logging jobs just a little higher than in 2007 - from about 20 to 23 thousand.

The leisure, hospitality sector, however has grown steadily - a straight line upward growth - and at orders of magnitude larger - from 2007's 498 thousand to 571 thousand in 2017.

Would it have grown even more if the PA Wilds promotion effort, advertising and focus not been withdrawn in order to facilitate the gas industry? Experts think so.

<http://nj.gov/drbc/library/documents/SocioeconomicValueDRB-UDEL-FinalRpt.pdf>

From Kaufman Report Executive Summary:

The Delaware Basin's water supplies, natural resources, and ecosystems in Delaware, New Jersey, New York, Pennsylvania and a small sliver of Maryland:

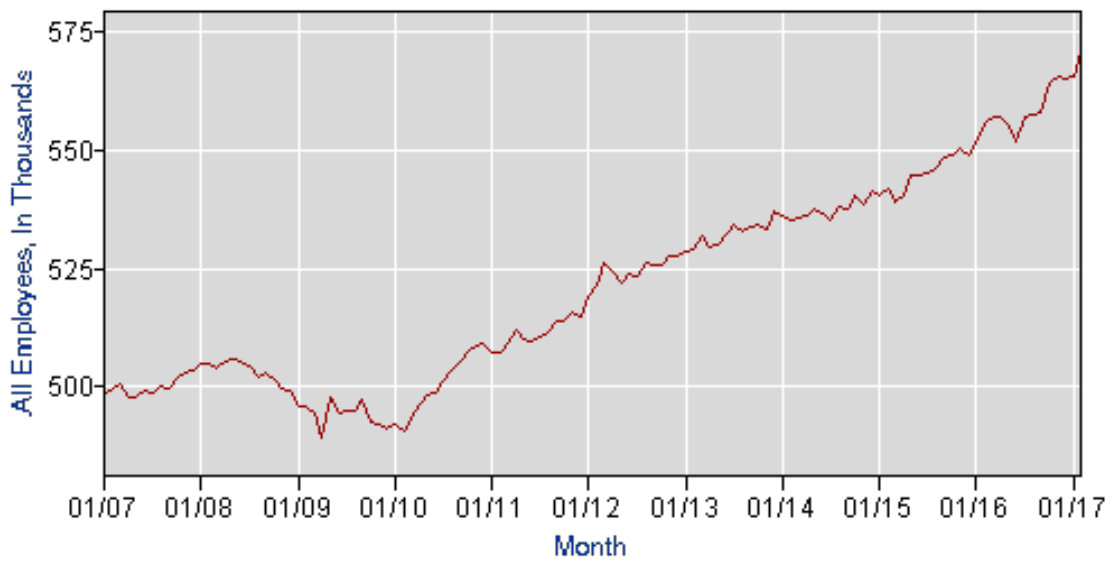
Contribute \$22 billion in annual economic activity from recreation, water quality, water supply, hunting/fishing, ecotourism, forest, agriculture, open space, and port benefits.

- 1 Provide ecosystem goods and services (natural capital) of \$21 billion per year in 2010 dollars with net present value (NPV) of \$683 billion discounted over 100 years.
- 2 Are directly/indirectly responsible for 600,000 jobs with \$10 billion in annual wages.

Jobs and PA Wilds material for this comment came from:
JOBS - two paths diverged - by Jon Bogle, Williamsport, PA compiled from Bureau of Labor Statistics - including the graphs below

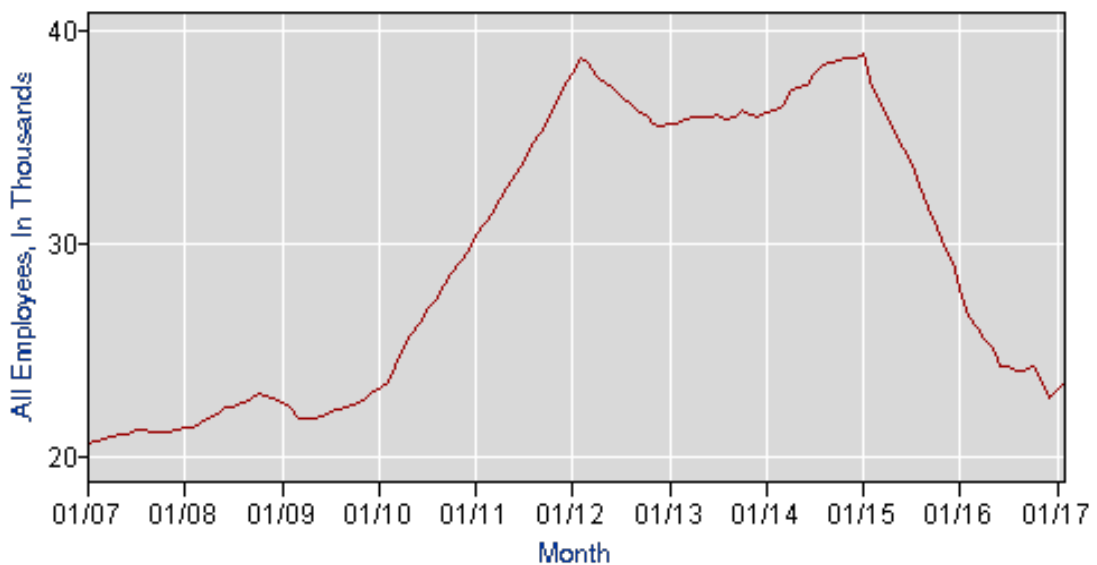
Leisure and Hospitality

All Employees, In Thousands - Pennsylvania - Statewide



Mining and Logging - including petroleum and gas extraction jobs

All Employees, In Thousands - Pennsylvania - Statewide



Second Comment from DCS

Spills, Brine Spreading and Wastewater Dumping

Chemical spills, wastewater dumping and brine spreading go hand in hand with Natural gas extraction.

In an analysis, which appeared in the Feb. 2017 in Environmental Science & Technology; 6,648 spills were reported across Colorado, New Mexico, North Dakota and Pennsylvania during a 10-year period. This, of course, does not include the countless spills that went unreported over that period of time. According to the study, 2 to 16 percent of hydraulically fractured oil and gas wells spill hydrocarbons, chemical-laden water, hydraulic fracturing fluids and other substances each year. It is well known that many of the chemicals in wastewater, often benignly referred to as “brine”, are toxic, but in 1980, via amendments to the Resource Conservation & Recovery Act, all the wastes from gas, oil and coal exploration and production were re-defined to be “SPECIAL” so they would not have to be handled as the toxic waste that they are, or be tracked, manifested or require proper disposal.

How to dispose of the wastewater from gas extraction is a problem for the industry. Although it is illegal to do so, the easiest manner of disposal is simply dumping the wastewater into the nearest brook, stream or river. This happens often - so often that the EPA encourages us on their website to “Report illegal disposal of wastes or other non-emergency suspicious activity related to oil and natural gas development”, providing a webpage specifically for that purpose.

Most fracking takes place in rural areas where it is close to impossible to catch industry workers in the act of illegally dumping frack waste.

Another way to dispose of wastewater is to spread the so called “brine” on roads in winter as it contains large amounts of salt, and in summer for dust control. But along with the salt and water comes the toxic chemicals which are washed off the roads by melting snow and rain, eventually finding their way to waterways.

The same study I referred to found that the brine being discharged, untreated, onto roads and into Pennsylvania’s waterways also contains significant concentrations of ammonium, iodide, bromide and radioactive materials. Each of these chemicals can be toxic to living creatures.

Iodide and bromide, turn into a variety of toxic compounds when they combine with organic metals in rivers and subsequently flow into water treatment plants, where they combine with the chlorine added to our drinking water. The interaction with organic metals and chlorine results in byproducts which are carcinogenic.

For the last three years, Damascus Citizens for Sustainability has been conducting a comprehensive survey to, for the first time, officially record with the Agency for Toxic Substances and Disease Registry, a part of the CDC, the experiences of people impacted by natural gas extraction and production. These surveys are also being taken by former gas industry workers, who have been impacted by the chemicals they worked with. Some of them have described to us how they were directed by the gas companies to dump wastewater into rivers and streams - something documented in the film, GasWork. We’ve brought copies of the film with us today and hope that you will take the time to view it. It is an eye-opener.

AND [Town of Tusten DRB ban resolution follows:](#)

Town Of Tusten, New York State
Resolution In Support Of:
Delaware River Basin Commission/DBRC
Resolution: # 91

WHEREAS, a fundamental purpose of government is to protect the health, safety and welfare of its citizens;

WHEREAS, the Town of Tusten lies within the Delaware River Basin and has an interest in the continued exceptional water quality and environment of this important natural resource;

WHEREAS, the Upper Delaware Scenic and Recreational River is classified as Special Protection Waters due to exceptionally high water quality and outstanding natural resources with special regulations that protect those resources and maintain the River's exceptional water quality;

WHEREAS, since 2010 the Delaware River Basin Commission has had in place a de facto moratorium that prohibits shale gas development within the Delaware River Basin until it adopts regulations and citing three primary concerns - the diminishment of surface and groundwater, the release of pollution, and the impacts of disposal of waste from hydraulic fracturing activities;

WHEREAS, the Delaware River Basin Commission has not conducted a comprehensive assessment of the cumulative and long-term impacts of shale gas development that concludes that hydraulic fracturing and shale gas development could safely occur within the Upper Delaware Scenic and Recreational River without degradation of the Watershed's water resources and the essential values of Special Protection Waters;

WHEREAS, there is significant evidence that shale gas development has an adverse effect on public health, property interests, agriculture and on our air, water and land;

WHEREAS, in recognition of those adverse impacts of shale gas development, the Town of Tusten enacted Zoning Law Article XIV which, among other things, explicitly prohibited certain uses and activities required or associated with hydraulic fracturing and shale gas development;

WHEREAS, in 2015, after seven years of review, the State of New York prohibited high-volume hydraulic fracturing, concluding that it posed "significant adverse impacts to land, air, natural resources and potential significant public health impacts that cannot be adequately mitigated";

WHEREAS, a vitally important consideration is the climate effects of shale gas development in the Delaware River Basin, given that methane is a greenhouse gas 86 times more efficient in trapping heat than carbon over a 20 year time frame and that vented and fugitive losses from shale gas infrastructure contribute to atmospheric warming;

WHEREAS, the Town of Tusten has pledged to be a NYS "Climate Smart Community" and is therefore committed to reducing greenhouse gas emissions; and

WHEREAS, the Town considers that the weight of the evidence demonstrates that hydraulic fracturing and shale gas development cannot be done without degrading the

exceptional water quality of the Upper Delaware Scenic and Recreational River and the environment within the Delaware River Basin;

NOW, THEREFORE BE IT RESOLVED that:

1. The Town calls upon the Delaware River Basin Commission to enact a complete and permanent prohibition of hydraulic fracturing and shale gas development within the Delaware River Basin; and
2. That a copy of this resolution be filed with the Delaware River Basin Commission, 25 Cosey Road, PO Box 7360, West Trenton, NJ · 08628-0360.

RESOLVED, this Resolution shall take effect immediately.

DULY ADOPTED, at the regular meeting of June, this 13th day of 2017.



Carol Ropke Wingert
Supervisor

ATTEST:



Wendy Tyler Julkewski
Town Clerk

I certify that this is a true and accurate copy of the resolution as adopted.

