

Damascus Citizens for Sustainability's comment regarding New York City Frack Waste Bill INT 446

It is our hope that the New York City Council will pass the Frack Waste Bill 446 with the following changes. One that the penalty for each violation be raised to \$100,000. Clinton County which has a population of about 81,500 has a penalty of \$25,000 per violation whereas the population of New York City is almost 8,500,000 residents. Moreover since frackwaste is a result of both oil and gas exploration, the bill should ban the deposit and use of frackwaste from both gas and oil production.

Our comment will specifically address the problems of using Publicly Owned Treatment Works (POTW) for disposing the produced fluids resulting from the drilling. The threats to the health of the City's entire water system are extensive and probable as forecasted by the lingering water crisis facing Pittsburgh. Between October, 2008 – 2010 there were multiple "bottle water alerts" (urging but not requiring residents to buy and drink bottled water instead of their own tap water) and the water has not been adequately tested since for all the materials that could cause negative health effects. The Pittsburgh events were caused by the disposal of frack fluids via POTWs into the Monongahela River which is the source of Pittsburgh's drinking water.

(See: <http://www.propublica.org/article/wastewater-from-gas-drilling-boom-may-threaten-monongahela-river>)

It was reported in December, 2014, "Contributing to the river's (Monongehela) water quality improvement was the voluntary elimination of Marcellus Shale gas drilling wastewater discharges into the river in May 2011, said Dave Spotts, chief of the state Fish and Boat Commission's Division of Environmental Services." The use of the word "improvement" does not mean that the damage from the wastewater discharges has been eliminated. The fact that the River "improved" when the wastewater dumping was halted demonstrates the deleterious effects of frack wastewater discharges have on our water bodies. (See: <http://www.post-gazette.com/news/environment/2014/12/29/Report-on-water-quality-says-Mononghela-River-no-longer-degraded-by-sulfates/stories/201412290187>)

One of the most important problems of high volume hydro fracturing in New York is what is to be done with the waste fluids. Three main methods of produced fluid disposal are shipping by trucks to various Publicly Owned Treatment Works(POTW), utilizing waste storage injection wells which penetrate deeply into the earth (See; <http://www.dcbureau.org/20101123992/bulldog-blog/pennsylvania-gas-drillers-dumping-radioactive-waste-in-new-york.html> and http://www.nytimes.com/2012/01/02/science/earth/youngstown-injection-well-stays-shut-after-earthquake.html?_r=1&emc=eta1 and re-injecting the frack fluid into the natural gas producing wells themselves. There is also a fourth way that is often used which is the release of fluids anywhere when no one is looking. See: <http://williamahuston.blogspot.com/2010/12/more-illegal-dumping-of-frack-fluids.html> and <http://www.pressconnects.com/article/20111201/NEWS01/112010437/> Each has enormous and dangerous environmental consequences. As long as these

problems exist the Frack wastewater should not be permitted to be disposed in any of the Publicly Owned Treatment Works (POTW) in New York City.

Gas industry exemptions and hazardous waste loopholes leave us and our water at risk. Under current NYS law, each of the identified facilities could accept fracking wastewater for treatment and disposal. Under current NYSDEC guidance, only pretreatment facilities are supposed to accept such wastewater, but these facilities are designed to treat domestic sewage and not industrial wastewater. Produced frack water should be characterized as hazardous waste water due to its toxic chemicals, heavy metals, radioactivity properties and unknown properties which are now proprietary information for the Exploration and Production companies. (A bill, A 07013, passed in the NYS Assembly 109-35 in June, 2011, categorized frack fluid as hazardous waste.) Such fluids cannot be handled by these facilities.

New York State requires that these facilities ask for permission to receive the produced fluid, but it does raise the questions about additional costs and regulations. The questions are: considering the small staff at DEC, whether there will be regulators to inspect these plants to ensure public safety when the fluids are released after treatment to large bodies of water, and to insure that the radioactivity and heavy metals in the produced fluid are removed. A more important question is, even if there will be enough regulators to oversee the Sewage Treatment Plants, whether the sewage cleaning process can clean these toxic fluids.

Even the New York State Supplemental Generic environmental Impact Statement (SGEIS) raises questions as to whether it can, through its normal bacterial process, clean both sewage and frack fluid, which contain biocides that will destroy the first methods of cleaning sewage. (The sewage facility at Newtown Creek in Brooklyn, is famous for its large Digesters Eggs which processes 250 million gallons daily. "Poop jokes aside, without facilities like Newtown Creek our waterways would be horrible. The Newtown Creek plant and the people who man it manage to turn millions of peoples' waste back into clean, environmentally safe water." (See: <http://gizmodo.com/where-new-york-citys-poop-goes-1622426763>)

The SGEIS does admit there is a problem in getting rid of the produced fluids (See appendix 22, page 77 of dSGEIS: "Please note that this disposal option is limited to the extent that municipal POTWs which utilize biological wastewater treatment are generally optimized for the removal of domestic wastewater and as such are not designed to treat several of the contaminants present in high-volume hydraulic fracturing wastewater.") ProPublica as long ago as 2009 published an article about the serious problems of using wastewater disposal option in treating produced frack fluid. These problems are just as relevant today as six years ago.

<http://www.propublica.org/article/drill-wastewater-disposal-options-in-ny-report-have-problems-1229>

How can a plant process produced fluids from fracking if the fluid contents are proprietary. Any publicly owned facility is obligated to protect the public good first and

not private companies' secrets. I have spoken with engineers familiar with waste treatment. The following was pointed out:

The fact that fracking fluids are allowed to remain proprietary when they are injected to a publicly owned space, the lithosphere/hydrosphere, equivalent to our atmosphere or oceans is patently absurd. We should refuse the trumping of private rights over public needs in the City of New York. Fracking fluid contents must be completely disclosed. However, what we do know of the components of frack fluid and frack waste is that disposal in Waste Water Treatment plants is detrimental to the area's environment.

A company should not have a right to proprietary processes which could result in contamination or damage to our city, its waters, or goods. Because this frack waste fluid could be discharged into our city's waterways, it remains impossible to recover 100.00% of its potentially toxic or damaging materials. As some of the materials (e.g. benzene, chromium, phenols, radioactive materials) can be hazardous in parts per million or billion, even a very small percentage of seepage is cause for concern since we do not know the actual chemicals analysis and definition of risk. The public interest in the prevention of processing of frackwaste should definitely override the desire for industrial privacy.

In appendix 22, the SGEIS tries to explain how to retrofit plants to accept this toxic water but examination of its flow chart raises questions as to whether this can be done in the first place. In addition, who will bare the costs of retrofitting the plants, if it can be done and who will oversee the changes in the process of sewage treatment is not clearly stated. Will these costs be a burden for the City's taxpayer? The SGEIS brings up the question of costs but does not answer it. (See SGEIS, appendix 22, page 77: "the additional monitoring and laboratory costs which will result from additional monitoring conditions in the permit must also be considered prior to deciding to accept this source of wastewater.")

Moreover since these fluids have radioactivity, heavy metals, and unknown propriety ingredients, the question begs; will residents accept discharging of such "treated" fluids in NYC rivers (Hudson and East Rivers), Long Island Sound and ocean shore lines? Thirteen counties in New York State now have bans on Frack waste because these communities will not accept such "treated" fluids in their estuaries or their lands. I believe, if they were informed, that the city's residents would welcome a law that would ban heavy metals, radioactive elements, unknown proprietary ingredients and biocides in their estuaries.

Biocides, heavy metals, benzene, toluene, ethylbenzene, zylenes(BTEX), radioactivity and unknown "proprietary" ingredients are likely to adversely affect the health and economic well being of city residents. These and other materials in flow back waters are toxic even in very small quantities. Moreover the effectiveness of these plants depend on bacteria generation needed to break down the sewage effluent. Biocides will kill this important aspect of processing our sewage. These materials have never previously been accepted into these water treatment plants, thus understanding the negative effects on

these facilities, New York City Council should pass INT 446 with the changes recommended above.

New York City Publicly Owned Treatment Works(POTW) as Absorbers of Waste Water

The SGEIS has listed every POTW in New York City as possible destination points for produced frack fluid brought to these plants by trucks. The City of New York has numerous industries that are vital to the economic health of the nation. To consider that trucks would have to travel within the borders of the New York City carrying these toxic substances is unfathomable. Imagine the terrible outcomes of spills. If anything, considering the importance of this international city, the precautionary principle has to be applied. Yet the SGEIS has listed all 14 POTW plants. The billions of Dollars of revenue that is generated in the city by large business enterprises could be severely compromised. Imagine what will happen to the tourism, financial, technical, real estate, cultural, etc. industries if there is a spill or a trucking accident or if the sewage treatment plants would be unable to absorb and clean the normally generated sewage water? (See Addendum: New York City's Wastewater Treatment System)

(For Locations and for information regarding the water site of discharge, See *New York City's Wastewater Treatment System*)

http://www.nyc.gov/html/dep/html/harbor_water/wssystem-plants.shtml

Wards Island WPCP	Red Hook WPCP
Owls Head WPCP	Tallman Island WPCP
Newtown Creek WPCP	Bowery Bay WPCP
Jamaica WPCP	Rockaway WPCP
North River WPCP	Oakwood Beach WPCP
26th Ward WPCP	Port Richmond WPCP
Coney Island WPCP	Hunts Point WPCP

In conclusion, using POTW for processing frack fluids could pose many dangers to New York City. The purpose of the New York City's Government is to protect the public good.

Respectfully submitted by:

Margery Schab
Board Member of Damascus Citizens for Sustainability