

Margery Schab, DCS Board Member

**New York State High-Volume Hydraulic Fracturing Comments
Comment Entry 2011 rdSGEIS**

The below comment addresses 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 state'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>)

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 reinjecting 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 As long as these problems exist the SGEIS should be withdrawn until the problems generated by these fluids are addressed.

This particular comment focuses on the impact of using such POTW treatment facilities in Downstate New York for disposal for waste fracking fluids. (Regions 1-3)

Gas industry exemptions and hazardous waste loopholes leave us and our water at risk. Under current NY 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

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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.

The dSGEIS does mention that these facilities have to apply to receive the produced fluid. But even the dSGEIS raises 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 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 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.") With all these caveats, still the dSGEIS lists three pages of POTW throughout New York State as possible receptacles for wastewater from fracking. (See appendix 21, pages 71-73) ProPublica two years ago 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 two 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 State of New York. Fracking fluid contents must be completely disclosed.

A company should not have a right to proprietary processes which could result in contamination or damage to public lands, waters, or goods in the normal course of events.

The fact that this fluid will be discharged and is not possible to recover 100.00% assures discharge of potentially toxic or damaging materials. As some of the materials (e.g. Page

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chromium, phenols) can be hazardous in parts per million or billion and even small percentage of expected failure to recover is cause for concern since we do not know the definition of chemicals analysis and definition of risk. As this is the case, the public interest in the mining process override the legitimate desire for industrial privacy. Regulation should mandate full disclosure of materials and full testing and disclosure of wastes at the industry's expense.

It seems to me unlikely drillers can assure aquifers are not effected by accidental contamination via existing natural vertical fractures intersecting horizontal drilling fractures, or leakage of vertical well casings. Even if accidental and rare, these exposures also argue for disclosure of fracking liquid and waste components following the spirit of Community Right to Know Act and Department of Transportation (DOT) regulations that regulates all other businesses and industries in the State.

Since the SGEIS chapter 5 contemplates legal disposal of the frack recovery fluid via in or out of state municipal wastewater treatment plants, this would greatly risk exposure of the public lands waters or goods to toxic produced frack fluid.

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 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 NYS rivers (Hudson and East Rivers), estuaries, Long Island Sound and ocean shore lines (where there exist important sea food and fish enterprises including the reemerging scallop industry). The impact of what to do with the fluid waste affects even Long Island. The state must consider the interests of the strong recreational and agricultural businesses on the North Shore, North Fork, the South Shore and the South Fork(the Hamptons). The economies depend on these industries, and Long Islanders will not welcome heavy metals, radioactive elements, unknown propriety ingredients and biocides in their recreational waters.

In the summary of the revised SGEIS from the DEC on page 6 is the following quote, "The extra water associated with such drilling may also result in significant adverse impacts relating to water supplies, wastewater treatment and disposal and truck traffic."

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and also see page 17 of the summary: “Another concern relates to potential spills as a result of trucking accidents.” and on page 23, “The cumulative impact of well construction activity and related truck traffic would cause impacts on the character of the rural communities where much of this activity would take place.” The SGEIS does not mention how drilling activity can affect the character of densely populated downstate metropolis. If the DEC admits the problems with produced water associated with drilling, but I have not found a reference as to who will pay for the regulators or bonds that should be posted in case of damages. The NYS Comptroller, Mr. DiNapoli, in his December 29 comment on the SGEIS, mentions the need of corporate posted bonds to cover remediation of damages caused by drilling for natural gas. Furthermore, the Exploration and Production Companies should be required to carry insurance for environmental damages after termination of the drilling, and transporting and processing waste fluids. SGEIS should be withdrawn until these and other problems are addressed.

In Long Island, 3 million people live in Nassau and Suffolk Counties. The Real Estate values, the recreation businesses, farming and wine industries and the fishing industry all depend on clean water in all bays, oceans and estuaries. Moreover, there already exist extensive water pollution problems due to the high development of these counties. Nassau and Suffolk counties currently rely on aquifers for their water. In Suffolk 75% of the sewage is still not by central sewer systems. Those few areas that do have wastewater treatment facilities are already at full capacity. In heavy rains the capacity can be overloaded. The problem has become so severe that companies that clean the private cesspools cannot take the waste to sewage treatment centers. The last thing Long Island needs is heavy metals, unknown propriety materials, and radioactivity in their waters and the possible spillage of the fluids from trucking these toxic chemicals to these facilities. One possible wastewater treatment plant listed in the SGEIS appendix 21, Bay Park STP, has the lowest rating in Long Island as reported by the Citizens Campaign for the Environment.

Publicly Owned Treatment Works (POTW) Listed in Appendix 21 of the SGEIS as Possible Recipients of Produced Frack Fluid in Nassau and Suffolk Counties.

All of these facilities if they attempt to process wastewater could negatively impact the local communities. Some of the chemicals in the produced frack fluids have been found to be volatile and when released into the atmosphere thereby pose an air pollution problem to workers of the plant and the local community.

Nassau County:

Inwood STP, 1 Bay Blvd, Inwood, NY empties into *Head of Bay* which eventually runs along side of the *Jamaica Bay Wildlife Refuge* which is a reknown public protected area.

Bay Park STP NASSAU COUNTY DEPT OF PUBLIC WORKS at FOOT OF 4TH
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AVENUE EAST ROCKAWAY, NY 11518-0148 lies just outside Bay County Park and discharges into Broswere Bay and South Oyster Bay.

Only ten miles East is Cedar Creek WPCP, at 3340 Merrick Road and Cedar Creek Park, Wantagh, NY 11793-4341. It lies in Cedar County Park. There it discharges into South Oyster Bay and Great South Bay affecting the Jones Beach State Park. Thus the 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 this locale. These and other materials in flow back waters are toxic even in very small quantities. Because these materials have never previously been accepted into these water treatment plants, the proposal for intake should first be reviewed under SEQRA before any other steps are taken to allow these effluents.

Glen Cove Wastewater Treatment Facility, 100 Morris Ave., Glen Cove, NY 11542-3191 is right near the Long Island Sound. Thus the biocides, heavy metals, benzene, toluene, ethylbenzene, zylenes(BTEX) and radioactivity will adversely affect the health and economic well being of this locale. These and other materials in flow back waters are toxic even in very small quantities.

The SGEIS has listed all treatment plants in Nassau County. The DEC should consider the real cumulative environmental impact of using every Wastewater Treatment Facility in Nassau County to process produced frack fluid from high impact horizontal drilling.?

In Suffolk 75% of homes and businesses do not have central sewage systems. Those few areas that do have waste water treatment facilities are already at full capacity. In Suffolk County a large percentage of homes and businesses use septic tanks and cesspools as their source of cleaning water wastes. Even with all these waste water problems in Suffolk County, one wastewater Treatment Plant is listed.(DPW Suffolk Co. SD #3 – Southwest)

In Suffolk County potable water comes from aquifers. In Remsenburg where I reside even though I get “county” water; it is actually comes from a well in Quoque. Long Island can ill afford any possible introduction of toxins into its drinking water system.

Suffolk County, POTW:

Bergen Point STP, 600 Bergen Avenue, West Babylon, NY 11704-8404 is right near the Bergen Point Golf Club and Venetian Shores Park. It is in the immediate vicinity of the beaches and the Atlantic Ocean.

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

The SGEIS has listed every POTW in New York City as possible destination points for

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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 revenue that is generated by the city 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
Owls Head WPCP
Newtown Creek WPCP
Jamaica WPCP
North River WPCP
26th Ward WPCP
Coney Island WPCP
Red Hook WPCP
Tallman Island WPCP
Bowery Bay WPCP
Rockaway WPCP
Oakwood Beach WPCP
Port Richmond WPCP
Hunts Point WPCP

Other Downstate POTW Facilities Listed as possible Facilities to Receive Fracking Waste.

All of these facilities if they attempt to process waste water will negatively impact the viability of local businesses. Some of the chemicals in the produced frack fluids are volatile and when treated, they are mostly released to atmosphere thereby posing an air pollution problem to workers of the plant and the local community.

In the Village of Suffern, Suffern SPDES #: NY0022748 is situated and listed in the SGEIS as a possible deposit of produced fracking fluid. The plant discharges into the Ramapo River. Suffern lies just over the border from New Jersey. This river currently is a place for trout fishing. Trout are sensitive to contaminants.

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Orangetown Town of Sewer Dept., 127 Route 303, Orangeburg, NY 10962-2209 is near the Hudson River just near the Palisades Parkway.

OCSD #1 Harriman STP, PO Box 627, Goshen, NY 10924 right near Harriman State Park.

Newburgh city of Water Pollution Control, 2 Renwick Street, Newburgh, NY 12550-6034 probably discharges into the Hudson River.

Westchester County(POTW)

Blind Brook 141 Oakland Beach Avenue, Rye, NY. discharges into Milton Harbor and then Long Island Sound.

Mamaroneck Treatment Plant

119 West Boston Post Road, Mamaroneck, NY 10543, which lies inside Harbor Island Park, a small peninsula and the water discharges into Long Island Sound.

New Rochelle STP, 1 Le Fevre Lane, New Rochelle, NY 10801-5709 discharges into Long Island Sound.

Ossining Wastewater Treatment Plant, 75 Westerly Road, Ossining, NY 10562-4634 is on the Hudson River therefore discharges into the Hudson River.

Port Chester Wastewater Treatment Plant, Fox Island Road, Port Chester, NY 10573 discharges into the Long Island sound.

Peekskill Wastewater Treatment Plant, 700 Highland Avenue, Peekskill, NY 10566-1800 discharges into Annsville creek and then the Hudson River.

Yonkers Joint WWTP, 1 Fernbrook St. Ludlow Dock S, Yonkers, NY 10705-1765. According to Riverkeeper, this wastewater treatment plant treats sewage from much of Westchester County. The area has boating, kayaking and fishing. As the address indicates it discharges directly into the Hudson River.

Rockland County SD #1 NY0031895 discharges on the West bank of the Hudson River.

City of Poughkeepsie Water Pollution Control Plant, 205 N. Water Street, Poughkeepsie, NY 12601-1757 discharges into the Hudson River.

New Windsor STP, Caesars Lane, Newburgh, NY 12550 discharges on the west shore of the Hudson River.

City of Beacon Wastewater Treatment Facility, Dennings Avenue, Beacon, NY 12508 discharges into the Hudson River.

Haverstraw Joint Regional Sewage Treatment Plant, Beach Road, West Haverstraw , NY 10993 discharges into the Hudson River.

Kingston (C) Sewers & WWTP, 91-129 East Strand Street, Kingston, NY 12401-6001 discharges into the Hudson River.

Mini-Pretreatment Facilities, Region 3

Arlington Sewage Treatment Plant, Sand Dock Road & IBM Road, Poughkeepsie, NY 12603 discharges in the Hudson River.

Port Jervis STP, 4 Neversink Drive, Port Jervis, NY 12771 lies on the bank of the Neversink River which flows into the Delaware River.

Wallkill (T) STP, 600 Route 211 East, Middletown, NY 10940-0398 is situated on the banks of the Wallkill River.

In keeping with the Precautionary Principle, compensation funds should be in place before any drilling takes place. The local communities and taxpayers should not have to pay for the negative impact on bridges and roads but these should be paid for through bonds and insurance underwritten solely by the companies engaged in drilling activity and held in escrow by the state.

(See this link and plugging in the SPDES numbers (indicated in bold) the entire information and location on these facilities are described.

http://oaspub.epa.gov/enviro/fii_query_dtl_disp_program_facility?pgm_sys_id_in=NY0031895&pgm_sys_acrnm_in=PCS.)

In conclusion, the SGEIS should be rewritten taking these problems into account. Using POTW for processing frack fluids could pose many dangers in New York State. The State of New York can only be protected if the consequences of high impact hydro fracking are seriously addressed. The purpose of Government is to protect the public good.

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