



**Comments by Hudson River Sloop Clearwater on  
NYS DEC dSGEIS for High-Volume Hydraulic Fracturing**

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**1. General Comments on the 2011 Revisions**

Hydraulic fracturing or hydrofracking is a highly technical and impactful industrial activity. It is imperative that before any drilling occurs we have a full complete analysis of the impacts to air, land, water and public health. Unfortunately the analysis in the dSGEIS falls far short of this goal.

**Failure to address public health:** As a Registered Critical Care Nurse for more than 20 years, I frequently observed illnesses and disorders that very likely had an environmental component, one that could have been prevented by more protective practices. New York State has failed to include an analysis of public health impacts or to meaningfully incorporate the State's Department of Health into its hydrofracking review – in spite of the fact that fracking-related air pollution and potential water contamination could have serious effects — especially on the elderly and children, and on communities downwind and downstream of drilling operations. Fracking chemicals are toxic, and include known carcinogens and endocrine disruptors. In addition, many air pollutants emitted during the drilling process are harmful to public health. These impacts must be rigorously studied before any permits are issued.

**New York Is Unprepared to Regulate Shale Gas Industrialization:** The September 2011 dSGEIS, while a significant improvement over previous drafts, illustrates how unprepared New York State is for horizontal hydrofracking of shale. The dSGEIS offers only vague guidelines - and virtually no regulations - for the regulation of this form of industrialization. The DEC is severely understaffed to deal with the activity, the State of New York is not prepared to tax it adequately. There are no facilities in the state to properly dispose of the billions of gallons of fracking flowback, and the economic study overstates the benefits by a factor of five or more.

**Regulatory Regime:** Given all of the state's deficiencies, New York has one of the worst regulatory regimes for shale gas in the United States. (<http://www.scribd.com/doc/72545747/Worst-Fracking-Regs>)

- The DEC allows gas wells to be drilled 100 feet from a house, which could put the home owner's mortgage into default ([http://www.nytimes.com/2011/11/25/us/officials-push-for-clarity-on-oil-and-gas-leases.html?\\_r=2&scp=4&sq=ian%20urbina&st=cse](http://www.nytimes.com/2011/11/25/us/officials-push-for-clarity-on-oil-and-gas-leases.html?_r=2&scp=4&sq=ian%20urbina&st=cse))
- The state has no guidelines for gas leases, and local authorities are unable to track them, since they are often not filed by the gas company. ([http://www.nytimes.com/2011/12/02/us/drilling-down-fighting-over-oil-and-gas-well-leases.html?\\_r=2&hp](http://www.nytimes.com/2011/12/02/us/drilling-down-fighting-over-oil-and-gas-well-leases.html?_r=2&hp))
- The new proposed guidelines only apply to wells that require over 300,000 gallons to frack. Under 300,000 gallons, the regulations revert to the 1992 GEIS, which allows wells as close as 50 feet from a sole source drinking water lake or stream (see 8.1.C. of the GEIS).

**New York State must undertake a cumulative impact analysis and a more accurate economic analysis:** NY State has spent enormous resources to develop the economy of upstate New York by attracting new high-tech industries, developing tourism, protecting agricultural lands, endangered species,

and historic sites, and encouraging land use compatible with these goals. The impact of gas drilling on these investments must be analyzed. The dSGEIS fails to fully account for all impacts to local communities. The DEC's socioeconomic impact analysis omits critical information about hydrofracking's fiscal impact on communities in terms of infrastructure, schools, and other costs. It also overestimates job creation, while underestimating loss of property value. A comprehensive, focused analysis of the cumulative impact of a full build out of natural gas wells using hydrofracking technology has not been undertaken, as is required by SEQRA.

Clearwater's many other concerns include:

- Inadequate and unclear rules about fracking in floodplains
- Limited protection for primary aquifers
- Unacceptable set-backs, even for NYC watershed
- Fracking waste is not classified as hazardous
- Tracking of fracking waste is left up to gas industry operators
- Open pits for storing fracking waste have not been outlawed
- Drilling is allowed under state-owned land
- Natural migration of methane and contaminants in drinking water is well documented, but has essentially been ignored.

## **2. New Section on Socioeconomic Conditions, Impacts and Mitigation**

Economist Dr. Janette Barth has identified these key points that the current dSGEIS does not adequately, but needs to address the following:

- Identify **all the costs and benefits** that shale gas extraction will entail.
- Clearly identify **who will gain and who will lose** by fracking; who and what will be negatively impacted.
- Consider **all phases** of shale gas extraction – from the activities of landmen and leasing, up to and including the build out of transmission systems, including compressor stations and pipelines, that may seize land by eminent domain.
- Consider the **cumulative effects** of an industrial activity that could radically transform much of the western part of the state.
- Consider the **long-term effects** that shale gas extraction will have on New York State. (The E&E study does not look beyond the period estimated for gas extraction.)
- Consider **worst-case scenarios**.
- Consider the absence of common oil and gas industry discounted cash flow analysis.
- **Fully account for all environmental and economic costs**, and the loss of opportunity costs and/or “next best use” of the land that will be industrialized by the gas extraction.
- Consider the fact that **proximity to gas wells might violate conventional home mortgages** and make it impossible to refinance homes, or to obtain home insurance.
- The losses that will be incurred by other industries, including tourism, outdoor recreation and agriculture, are not quantified.

- **Inflated tax revenue estimates** appear to be based on overstated gas production estimates and an overestimate of New York’s recoverable shale gas reserves.
- **Adjustment costs**, such as the estimated \$226 million it will cost to increase capacity at the DEC are completely ignored.
- The **NYS Department of Transportation estimates** that infrastructure improvements and repairs will cost hundreds of millions of dollars a year is ignored.
- The **cost of mitigating environmental damage** is ignored.
- The **cost of mitigating adverse health impacts** is ignored.
- The **costs to local communities** for increased demands on first responders, law enforcement and medical services are ignored.
- A **“one size fits all” approach** to the impact that shale gas extraction will have on communities ignores the actual impacts that might be felt by some communities.

In addition the DEIS uses:

- **Inappropriate economic models**, with a sole reliance on input/output analysis;
- **Arbitrary estimates of how local labor** will replace transient labor;
- An **assumption that shale wells will produce for thirty years**, which for which there is no precedent.
- An inadequate description of how shale gas extraction will **impact real estate values**.

Clearly New York State should not move forward with shale gas extraction until these many defects have been addressed by a thorough and competent socioeconomic analysis. It is equally clear that such an analysis will be very different than the E&E study in the Draft SGEIS. A satisfactory assessment may require the input of experts beyond those available at E&E.

It appear this report and the references to it in the dSGEIS appear to have been prepared in haste to justify allowing hydrofracking to go forward based on economic expediency. The DEC has not looked carefully at the sociological impacts of hydrofracking; there is no consideration of the negative impacts of shale gas industrialization on home values, village centers, other industry, the environment, people's health, or other negative effects of shale gas industrialization. This includes **Environmental Justice** impacts, for which Clearwater will offer supplemental comment ([www.greenchoices.cornell.edu/development/marcellus/policy.cfm](http://www.greenchoices.cornell.edu/development/marcellus/policy.cfm)).

We believe the public must be permitted to read and comment upon the revised socioeconomic report before its findings are incorporated into a final version of the SGEIS. Because of the potential impact on the Revised Draft SGEIS, the SGEIS comment period should be extended until after the expanded report is released. We ask that when the Department receives the expanded report from E&E it release it to the public, and commence a public comment period of not less than ninety days.

**Gas Reserve Estimates:** The economic section of the report is premised on 30-year well lives, however there are no 30 year old horizontal shale gas wells in existence. The report overstates jobs, etc. by a factor of 5 or more. (<http://www.scribd.com/doc/68519448/NY-Gas-Reserve-Estimates> )

**How much gas is in the Marcellus Formation?** The natural gas industry overestimates the volume of gas in the Marcellus Formation by a factor of five times more than the US Geological Survey (USGS).

**Shale Gas Decline Curves.** The gas industry tells landowners that wells produce for decades, however their own internal documents show that most of the gas is gone after just five years.

- The report fails to state what reserve estimates were used, only that they were furnished by a gas industry trade association, the International Oil and Gas Association (IOGA) – not by a qualified independent geologist. (<http://www.scribd.com/doc/65070417/SGEIS-Socioeconomic-Hype>)
- The DEC fails to take into consideration the actual economics of horizontal shale gas drilling. At current and projected gas prices, it is likely that gas production from the Marcellus would be only a break-even proposition, at best. The weak economics of the Marcellus belie all the projections of the E&E report – which fails to address the actual economics of shale gas production. (<http://my.brainshark.com/Voodoo-Frackonomics-663835911#>)
- The DEC is clearly overstating the number of jobs that might be created by shale gas exploration, possibly as much as by a factor of 9x (<http://www.foodandwaterwatch.org/reports/exposing-the-oil-and-gas-industrys-false-jobs-promise/>).
- The E&E study failed to take into account the real damage done to residential property values near drilling sites. The loss in value can be catastrophic, and can effectively render some homes uninsurable and without the ability to obtain mortgages. (<http://www.scribd.com/doc/70784790/Fracking-the-Homestead>)

### **3. New Section on Visual And Noise Impacts and Mitigation**

**The DEC Does Not Have Any Noise Pollution, Light Pollution and View Standards:** This issues are properly dealt with via local ordinances – which are commonly applied in other states to drilling. The DEC proposes no objective standards, no regulations for noise and visual impacts, no new setback from existing structures for HVHF wells, leaving a regulatory void to be filled by municipalities. Indeed, it would be a bit preposterous for the woefully undermanned DEC to imply that it could effectively enforce a noise ordinance on drilling operations in a township. So this new section reads as so much boiler-plate, of no use to actually mitigate noise and light pollution, which can only be dealt with effectively by local ordinances (see <http://www.scribd.com/doc/65111612/SGEIS-Noise-Impacts>).

### **4. New Sections on Existing Transportation Conditions, Impacts, and Mitigation**

**The DEC Does Not Regulate Trucking.** NY State has no revenue from shale gas to pay for the damages done to state roads and bridges.

- The impact of trucking in shale gas industrialization can be extremely disruptive to rural communities. The draft SGEIS addresses the negative impacts of hydrofracking truck convoys in a cursory, oblique manner; see for instance 6.11 and 7.11.1.1. **That is because the DEC has no regulatory authority over trucking.** Indeed, the state has no ability to enter into road use agreements with trucking operations, and, as a practical matter, little control over such convoys other than speeding tickets and safety violations, which are poorly enforced on rural roads.
- All New Yorkers in Upstate would experience the negative impacts of High-Volume Hydrofracking (HVHF) in the form of increased truck traffic – there are no prohibitions in place, no mitigating factors, and no offset for the cost of damage to roads, bridges, traffic crowding other users off the road, car repairs and damage to windshields. Most insidiously, there is no offset for the loss in property values for buildings along trucking routes, nor is this taken accurately into account in the

Socio Economic study (see <http://my.brainshark.com/Frack-Truck-Convoys-By-Chip-Northrup-142091865>).

- **The DEC has no ability to enforce regulations over trucking, since it has no authority to control truck routes or enter into road use agreements with drillers. Only the towns, counties and cities have that authority.** (<http://my.brainshark.com/Road-Use-Ordinances-in-New-York-224232466>)
- Other agencies, notably the NY State Department of Transportation (NYSDOT), have looked into the costs to taxpayers for repairing damaged roads and bridges. Their analysis indicates hundreds of millions of dollars in unfunded costs to repair state and local roads. (<http://williamahuston.blogspot.com/2011/07/wow-leaked-dec-document-on.html>)
- Few counties or towns have enacted road use ordinances in NY State, although such ordinances are lawful at the county, town or village level. Without a mechanism for compensation by the gas drilling industry, these protection will be necessary for HVHF to proceed without devastating local roads. (<http://my.brainshark.com/Road-Use-Ordinances-in-New-York-224232466>)
- Drilling trucks and trucks carrying fracking waste are notorious scofflaws that speed on their way to and from the well sites and use sub-standard equipment. This has lead to some catastrophic spills and accidents in the hilly rural roads of northeast Pennsylvania. (<http://www.sungazette.com/page/content.detail/id/556302.html>). (<http://www.rocket-courier.com/news/content/drilling-truck-crash-kills-one-pipeline-construction-disgorges-mud-creek>)
- The DEC should not issue a drilling permit without proof of compliance with local road use laws.

## **5. New Section on Community Character Impacts and Mitigation**

### **The absence of adequate protections in the dSGEIS puts the onus on Local Ordinances.**

This section goes around in circles to avoid the obvious: the aspirations, goals and character of a community are reflected and defined by its built environment, its land use plans, and its local laws; ie. its ordinances. The understaffed DEC may comment on these matters, but it cannot and should not define them for a community, nor can it adequately protect a community from the negative impacts of shale gas industrialization. That is the proper task of the community itself – as embodied in its laws. For this reason, the DEC has consistently deferred to local ordinances.

(<http://www.scribd.com/doc/63141534/NY-Gas-Well-Zoning>)

**Setbacks:** The DEC proposes no new setbacks for HVHF wells from existing structures in its draft regulations, which leaves the setback where they are in the GEIS Chapter 17 A.1. B. 1. b., which is 100 feet from a house, which would be illegal under any other state or local zoning law that addresses oil and gas wells, leaving New York with the worst regulations in the nation.

<http://www.scribd.com/doc/72545747/Worst-Fracking-Regs>

- The DEC setbacks are less than those required by mortgage lenders. ([http://www.nytimes.com/2011/10/20/us/rush-to-drill-for-gas-creates-mortgage-conflicts.html?\\_r=2&pagewanted=all](http://www.nytimes.com/2011/10/20/us/rush-to-drill-for-gas-creates-mortgage-conflicts.html?_r=2&pagewanted=all)). (See also: <http://www.scribd.com/doc/70784790/Fracking-the-Homestead>)
- The DEC proposes no objective standard for noise pollution. The lack of protections will have to be dealt with local ordinances. Understanding this, many New York cities and towns have begun to take steps to protect their citizens. (<http://www.scribd.com/doc/69318130/NY-Local-Shale-Gas-Laws>) and

([https://docs.google.com/spreadsheets/ccc?key=0AtfSL1RGXEFqdE8zdWhkb2V4cWRXUVBVUnlwRzhsZ2c&hl=en\\_US#gid=0](https://docs.google.com/spreadsheets/ccc?key=0AtfSL1RGXEFqdE8zdWhkb2V4cWRXUVBVUnlwRzhsZ2c&hl=en_US#gid=0))

- All major shale gas drillers are headquartered in states where local "home rule" ordinances are used to regulate drilling (<http://www.scribd.com/doc/63141534/NY-Gas-Well-Zoning>)
- Community character should be defined and preserved in New York - by each community for itself. (See: <http://www.scribd.com/doc/65308566/SGEIS-Community-Impacts>)

**Land Use:** DEC has honored local land use ordinances – it should do so with shale gas industrialization (<http://shaleshockmedia.org/2011/11/24/3-david-slottje-enfield-legal-presentations-11-17-11-2/>)

## **6. New Local Government Notification and Coordination Requirements**

The DEC did not involve any municipalities or counties in preparing the drafts of the SGEIS. While the notification prior to issuing a well permit is a welcome change, the local government should be able to exercise all of its powers over shale gas industrialization, as is the norm in other states.

(<http://www.scribd.com/doc/63141534/NYzoning>)

## **7. Requirements for Mandatory Disclosure of Hydraulic Fracturing Additives & Alternatives**

**Disclosure of chemicals:** The draft SGEIS calls for chemicals used in hydrofracking to be disclosed to NYS DEC and to emergency responders, however, this information does not need to be made available to the public or those on whose land drilling would occur. Every New Yorker has a right to know what chemicals are being used for fracking. We are not asking to provide the public with the formula or specific quantities, but rather to clearly identify all chemicals used in any fracking process.

Disclosure of all frack fluid chemicals should be mandatory or no permit should be issued. There should be no exceptions to this, no loopholes for so-called “proprietary” information.

**Prohibition of chemicals:** Also the Draft does not provide for a list of prohibited chemicals. The chemicals that have been used in fracking fluid in other states are known to be serious carcinogens to humans and animals. Safer alternatives should be required.

## **8. Enhanced Requirements for Well Construction and Management of Drill Cuttings**

**Waste:** The cuttings from drilling are potentially radioactive, and billions of gallons of flow-back water and other wastes from this industry are hazardous. However, neither the dSGEIS nor any other state rule or regulation identifies these wastes as hazardous. This waste must be treated as hazardous waste. Mud cuttings should be tested, and, if radiation is present, this material should only be disposed of in facilities permitted to accept radioactive waste. There are currently no wastewater treatment facilities in NY State capable of handling the liquid waste from this industry. Wastewater treatment facilities discharge effluent into our streams and rivers, which can serve as drinking water supplies. While DEC proposes a tracking system for solid and liquid wastes generated in connection with fracking – similar to that which is required for medical waste – this system will not protect New Yorkers from serious public health threats associated with inadequately regulated hazardous wastes and regulations that are poorly enforced. Injection wells offer no better a solution. No well permit should be issued unless the operator can prove how the fracking waste will be safely disposed of.

## **Additional Casings Will Not Prevent Gas Wells From Polluting Groundwater With Methane**

<http://www.biology.duke.edu/jackson/pnas2011.pdf>

- Gas wells can leak drilling mud into groundwater as soon as they are drilled.  
([www.rural.palegislature.us/documents/reports/Marcellus\\_and\\_drinking\\_water\\_2011\\_rev.pdf](http://www.rural.palegislature.us/documents/reports/Marcellus_and_drinking_water_2011_rev.pdf))
- As the casing shrinks gas can leak on the outside of the outermost casing.  
(<http://www.scribd.com/doc/65704543/Casing-Leaks>)
- If the casing rust away, they will leave a pathway for pollution into groundwater.  
(<http://www.propublica.org/article/deteriorating-oil-and-gas-wells-threaten-drinking-water-homes-across-the-co>)
- Adding a 3rd casing will not solve these chronic gas drilling problems.  
(<http://www.scribd.com/doc/65577477/SGEIS-Well-Construction>)

## **WELL PADS**

### **9. Prohibition on Well Pads In NYC and Syracuse Watersheds and 4,000 Foot Buffer**

**Drinking Water: The New York City and Syracuse Watersheds:** Currently, the Catskill/Delaware system and Skaneateles Lake watershed provide half the state's population with their water. These two areas have earned filtration avoidance determination from the EPA. The dSGEIS provides a 4,000-foot buffer around these watersheds in which drilling is prohibited; however, because the horizontal portion of the wells can extend at least 5,000 feet, and fractures in subsurface geology may extend further, this buffer is insufficient. A 4,000 feet, less than the length of a horizontal lateral, means that a shale gas well could be drilled under the NYC or Syracuse watersheds from a well pad located outside of these watersheds.

**NYC Water Supply Infrastructure:** The State is *not* proposing to put this critical infrastructure off-limits to new drilling. These aqueducts, the construction of which commenced back in the 1940s, are already in a deteriorated state. Clearwater is concerned about two specific risks from drilling on or around the NYC water supply infrastructure:

- 1) the threat that vibrations and shaking from drilling activities could jeopardize the stability of the aqueducts themselves; and
- 2) the threat that fracking fluids or other contaminants could migrate in and around the vicinity of the drilling rigs and enter the aqueducts via small cracks or fissures in the aqueducts walls – potentially contaminating NYC's drinking water even if the watershed itself is protected.

NYC DEP had proposed a 7-mile buffer around this sensitive infrastructure. DEC's proposed 1,000-foot buffer is clearly insufficient. Clearwater recommends that DEC perform a rigorous analysis and expand the area in which it *prohibits* drilling around any NYC water supply infrastructure that falls outside the NYC watershed limits.

**New York City residents are protected; however people Upstate communities are not.**

**Buffers are inadequate to assure protection of aquatic ecosystems:** The proposed gas well setback from trout streams is only 150', which endangers fish and the aquatic ecosystems near hydrofracking sites.  
(<http://www.scribd.com/doc/65224175/SGEIS-NYC-Reservoirs>)

### **10. Prohibition on Wellpads in 2,000 ft. Buffer Around Other Public Drinking Supplies**

All of the proposed setbacks are less than the length of horizontal laterals – which could result in a horizontal shale fracture occurring under a municipal drinking water supply.

- The proposed setback would increase the chance that many New York lakes could become polluted by shale gas or fracking fluids. (<http://www.scribd.com/doc/66390117/SGEIS-Aquifers>)
- The setback proposed is provisional. There is no mechanism proposed to increase the setback based on experience, topography, etc. The protection for these reservoirs could be changed by the DEC at any time.

### **11. Prohibition on Well Pads in 500 foot Buffer Around Private Water Wells**

**Private Water Wells:** NYS DEC is proposing a 500-foot buffer around private wells, but will allow landowners to waive this. The government has a responsibility to protect and ensure clean drinking water for its residents by putting this buffer in place. They should not put landowners in a position of balancing potential economic gain against risking their health and safety.

**The proposed setback would allow many water wells within a kilometer of a gas well to become polluted with drilling mud, then infiltrated with fracking gasses.**

(<http://www.scribd.com/doc/65577477/SGEIS-Well-Construction>)

- The DEC's setback of a shale gas well from a water well is the worst in the United States – (<http://www.scribd.com/doc/72545747/Worst-Fracking-Regs>)
- The DEC ignores the threat posed to shallow water wells by shale gas wells. (<http://www.scribd.com/doc/73405864/Anomaly-in-the-Duke-Methane-Study>)
- The proposed gas well setback from a private water well is 500 feet, which is 100 feet *less* than the setback in the Fort Worth, Texas zoning ordinance – where there are no shallow private water wells. The DEC has ignore all the empirical evidence that drilling gas wells is a sure way to infuse groundwater with methane. (<http://www.scribd.com/doc/65079406/SGEIS-Water-Setbacks>)
- A recent Penn State Study on gas wells and drinking water, which has been withdrawn, did not look at methane contamination - 79% of the wells sampled had no methane testing, nor was any methane testing done on wells that had known problems with methane. (<http://www.scribd.com/doc/71819754/Water-Contamination-From-Gas-Drilling>)
- A Duke University study published in May found that methane levels in dozens of drinking-water wells within a kilometer (3,280 feet) of new fracking sites were 17 times higher than in wells farther away. (<http://www.scientificamerican.com/article.cfm?id=safety-first-fracking-second>)
- As residential water wells become polluted, many home owners will be unable to obtain mortgages or sell their houses. <http://www.scribd.com/doc/70784790/Fracking-the-Homestead>

### **12. Prohibition on Wellpads in Primary Aquifers and 500 ft. Buffer**

Primary Aquifers are "highly productive aquifers presently utilized as sources of water supply by major municipal water supply systems."

Principal Aquifers "aquifers known to be highly productive or whose geology suggests abundant potential water supply, but which are not intensively used as sources of water supply by major municipal systems at the present time".

Both Principal and Primary aquifers should be given equal protection, because present and future water supplies are irreplaceable once contaminated.

### **13. Prohibition on Well Pads In 100 Year Flood Plains**



The "100 year" Floodplain is defined as the amount of floodwater expected to be equaled or exceeded every 100 years on average, but is more accurately defined as the 1% probability of an annual exceedance, since it is a flood that has a 1% chance of being equaled or exceeded in any single year. This standard used to define the 100-year floodplain has been breached increasingly frequently due to climate change throughout NY State including much of Upstate. The DEC won't know what constitutes a 100 year flood plain until this standard is re-evaluated based on more recent data and climate change prediction. In the meantime, wells, gas processing, storage pits or tanks or any ancillary facility should be prohibited in 500-year flood plains.

#### **14. Prohibition on Wellpads on State-owned Lands Administered by DEC**

Since all major lakes are owned by the State, this prohibition should apply to all major lakes, under which drilling should be prohibited. The setback from state parks should follow the best practices of other states – such as the one mile setback from state parks in Utah.

#### **15. Requirement for Site-specific SEQRA Determination for Wellpads in Principal Aquifers.**

This requirement is only provisional for two years and should be mandated without limit.

### **WATER WITHDRAWALS, PASSBY FLOW**

#### **16. Requirement for Site-specific SEQRA Determination for Certain Water Withdrawals**

No water should be used for fracking operations without a rigorous SEQRA review.

#### **17. Passby Flow: Calculation Methodology and Well Permit Conditions**

### **BIODIVERSITY AND HABITAT PROTECTION**

#### **18. Requirements Related to Forest and Grassland Focus Areas**

No standards are proposed for replanting or replacing trees felled or repairing disturbed grasslands.

#### **19. Requirements for Invasive Species Management Plan and Practices**

The cutting of trees and construction of roads to build and access well pads in sensitive habitat will introduce invasive species – brought in by transient crews of drilling and fracking operations.

### **AIR QUALITY**

#### **20. Air Permitting Process and Well Permit Conditions for Avoiding or Mitigating Adverse Air**

The DEC ignores the fact that gas processing plants – which split the raw gas into methane, propane, etc. – are unregulated sources of pollution – radon, benzene, and other toxic gases, which are routinely vented and/or flared from the processing plants in the field. Almost all aspects of drilling and fracking a shale gas well creates air pollution, some of which in turn creates ozone. In a valley on a still day, local air quality will suffer.

#### **21. Air Impact Assessment, Supplemental Modeling, and Assessment of Regional Emissions**

Every aspect of shale gas industrialization, from the diesel trucks that transport fracking fluid and fracked gas to the diesel engines used at the well site to the fracking emissions, are powerful polluters. The DEC fails to address the most common type of shale gas air quality problems – the emission of radon and benzene from gas processing plants in the field (<http://www.scribd.com/doc/70461168/Venting-Flaring-Gas>). (<http://vimeo.com/32302635>)

## **22. Air Quality Monitoring Program**

- Air quality is degraded by venting from gas processing plants in the field, which may be done when there are no inspectors on duty or the wind is blowing in a direction that avoids monitoring ([http://www.earthworksaction.org/PR\\_DISHmethanetechnology.cfm](http://www.earthworksaction.org/PR_DISHmethanetechnology.cfm))
- Every aspect of shale gas industrialization pollutes the air, starting with diesel truck traffic and continuing at the well site with diesel powered compressors and generators. The DEC does not have the staff to adequately monitor air quality or to enforce air quality standards.

## **23. Greenhouse Gas Mitigation Requirements**

- The production and combustion of any hydrocarbon will increase greenhouse gas emissions, which in turn will exacerbate global warming. Natural gas is one of the worst culprits in this regard.
- Methane is a potent greenhouse gas that is released during all phases of gas production, processing, compression and transport. <http://www.scribd.com/doc/70460752/Howarth-Testimony>
- Natural gas and waste gases are routinely vented at the rig, in processing plants and at compressor stations. If it is easier to vent, the gas is vented. <http://www.scribd.com/doc/70461168/Venting-Flaring-Gas>

## **24. Comments on Other Revisions that are included in the 2011 dSGEIS**

### **Fracking Waste Cannot Be Disposed of Safely or Economically In New York**

7.1.7.1 Tracking Waste: It is highly unlikely that DEC would be able to adequately enforce the proposed tracking system for billions of gallons of fracking flowback – particularly since there is no place to dispose of fracking fluid in New York State. It will have to be trucked across state lines, outside of the DEC's jurisdiction, to disposal wells in Ohio or elsewhere. Since Pennsylvania municipal treatment plants are not allowed to take fracking flowback, it is being trucked into New York for disposal – at municipal treatment plants that are not capable of processing it. Thus fracking waste is already being transported across state lines in violation of existing regulations. **No well permit should be issued unless the operator can prove how and where the fracking waste will be safely and finally disposed of.** <http://www.scribd.com/doc/65435029/SGEIS-Fracking-Flowback>

## **25. Additional Changes Should Be Reflected in the Final SGEIS**

**Compulsory Integration:** Compulsory integration should not be applied to the lateral sections of wells. In a shale gas well, you cannot tap the gas unless you frack it. The lateral extension of the horizontal portion of the well should not be allowed to extend under a neighboring. Compulsory integration of adjacent property in horizontal shale wells is essentially a form of eminent domain that will be detrimental to the adjacent property owners, who may not wish to participate in this industrial activity and whose autonomy and property rights should be respected.

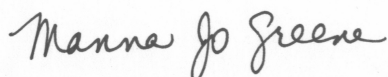
**Funding of Regulatory Oversight and Repair of Damages to State Property:** New York state is one of the few places that does not tax gas at the wellhead.

- NY State derives no direct revenue from the activity and has no source of funding for regulatory oversight or funds to repair damaged roads, bridges and other infrastructure.
- No horizontal shale gas wells should be permitted until the state has a revenue source to regulate them. <http://www.scribd.com/doc/63145742/NYSeveranceTax>
- No horizontal shale gas wells should be permitted until the DEC can demonstrate that it has adequate staff to rigorously monitor and enforce protective regulations.

**Open Pits:** The State is proposing to require a site-specific environmental review prior to permitting any open pits. This is an improvement on the previous draft, which allowed open impoundments without review, but open pits should be prohibited. These pits – whether on individual well pads or in centralized locations are subject to flooding. Floodwaters can mix with the chemicals impounded in open pits and transfer contaminated water into drinking supplies.

**Reconsideration of Buffers:** The State’s proposed “prohibited” buffer areas (around primary aquifers, which serve as public drinking water supplies, principal aquifers, which could serve as public drinking water supplies, and tributaries thereto) include provisions for reconsideration, which would allow the state to consider permitting drilling in buffer zones within 2-3 years of assessing “actual experience and impacts associated with permit issuance.” Buffers should be required permanently, not provisionally.

Respectfully submitted,



Manna Jo Greene, Environmental Director, Hudson River Sloop Clearwater, Inc.

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Addendum:

On Environmental Justice, Maude Barlow and Wenonah Hauter have asked, “Why Niagara Falls...? With a median income roughly 40 percent below the state average, Niagara Falls, hard hit by economic woes, is vulnerable to such schemes in order to finance its water infrastructure. It’s a classic example of environmental injustice — burdening a low-income community with a large minority population with the toxic waste generated in other parts of the state. We’ve seen this play out far too often with polluting industries. But unlike Love Canal, this time local officials would be choosing to accept toxic chemicals into their community in order to generate revenue... Niagara’s waters have been a popular destination vacation spot, a drinking water source for millions and a landmark for two nations. Tragically, these waters have been the target of some of the greatest injustices ever unleashed upon our environment. This time, let’s avert Niagara’s next environmental disaster before it occurs and stop the Niagara Falls Water Board from succumbing to the fiscal pressure to turn the region into New York’s toxic waste dump.”

(<http://www.buffalonews.com/editorial-page/viewpoints/article631280.ece>)

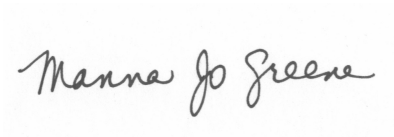
Here is the list of Potential Environmental Justice Areas in NY State and the PEJA map of Niagara County:

<http://www.dec.ny.gov/public/899.html>

[http://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/niagaraco.pdf](http://www.dec.ny.gov/docs/permits_ej_operations_pdf/niagaraco.pdf)

The best way to assure environmental justice with regard to fracking is not to generate fracking flowback fluid to begin with.

Sincerely,

A handwritten signature in cursive script that reads "Manna Jo Greene". The signature is written in black ink on a light-colored background.

Manna Jo Greene, Environmental Director  
Hudson River Sloop Clearwater, Inc.