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January 10, 2012

Mr. Eugene Leff
NYS Department of Environmental Conservation
Attn: **dSGEIS Comments**
625 Broadway, 14th Floor
Albany, NY 12233-6510

Re: Comments on Revised Draft Supplemental Generic Environmental Impact Statement On The Oil, Gas and Solution Mining Regulatory Program (rdSGEIS) September 7, 2011 with reasons for its necessary withdrawal and reopening of Scoping

Dear Mr. Leff,

Executive Summary of rdSGEIS

Page 1.

The expanding export of natural gas to the highest bidder outside of the US and the subsequent rise in its price (clearly part of the industry's gameplan), potential decline of federal and state economic factors, plus liability, damage and health care remediation costs which must be assigned to industry have not been taken into consideration when stating that shale gas drilling "has the promise of lowering costs of users and purchasers of this energy commodity."

The dSGEIS ignores the USGS recent cut in its estimate of gas reserves by 80%. Its reliance on outdated information vastly overstates the estimates of gas reserves. The dSGEIS is using a recovery estimate five times the USGS expectation.¹

Page 2 General Background

- The revised September 2011 draftSGEIS fails to include the recently commissioned expansion of the socioeconomic study by Ecology and Environment Engineering. Under SEQRA, the public is entitled to comment on a fully inclusive document, not on segmented parts of it. Hence, this draft must be withdrawn and a newly revised draft issued which includes the expanded socioeconomic study with a new public comment period thereafter.

¹ "Sustainable Otsego, December 2011, Summary Critique of DEC's draft SGEIS on Fracking: Why the dSGEIS should be withdrawn and the Scoping process reopened to consider prohibition of fracking for natural gas in NYS- 52 Serious and Fatal Flaws in the dSGEIS," page 2. "...the socio-economic study estimates that reserves recovered in NYS over a 60 year period will equal 150 trillion cubic feet (the moderate estimate). NYS is home to 20% of the Marcellus formation. The USGS estimates 84 trillion cubic feet for the entire Marcellus formation. If NYS has an average share of this 84 trillion, it would have total reserves of 17 trillion cf. Thus the DSGEIS is using a recoverable estimates that is five times the expectation used by the USGS.

- Placing off limits “...watersheds associated with unfiltered water supplied to the New York City and Syracuse areas” is insufficient and disingenuous as it fails to include all other unfiltered water supplies such as private wells. If drilling is unsafe for NYC and Syracuse watersheds, it is unsafe for any unfiltered watersheds and should be prohibited in all of them - equal protection for all unfiltered water consumers.
- The site-specific conditions vary widely throughout NYS and dictate that a generic approach is inappropriate. The acknowledgment that the New York City and Syracuse watersheds receive special treatment undermines the dSGEIS’s use of generic review in all other areas.

Page 3 SEQRA Procedure to Date

- ***The SGEIS contains No Action Alternative and must, under SEQRA. Hence, the Scoping must be reopened and a No Action Alternative and reasons for prohibition of hydrofracking for natural gas in NYS considered.*** It is baseless to claim that a No Action Alternative was not considered in the Scoping because, among other reasons, no income benefit when accrue. Complete negative impacts remain unanalyzed economically (and environmentally) to prove that any positive rather than negative costs and harms net benefit would take place. This fatally flaws this dSGEIS in its assumption and prejudgment of the benefit of oil and gas production, is irresponsible, and leaves the document’s credibility of review in question. Mounting scientific evidence of contamination of water, air and land, impact on human, livestock and wildlife health, and inability to dispose of hazardous, radioactive frack waste remain reprehensibly ignored or gravely under examined in this draft document that must be corrected in a new Scoping and dSGEIS issuance with new rounds of Comment Periods.
- The dSGEIS is also fatally flawed by not comparing gas production with renewable fuel production. The lack of such a comparison makes it impossible to determine whether or not gas and oil production is in the public interest. An assessment must be made in a new rdSGEIS that compares oil and gas production with renewable energy production to determine what is in the best public interest. A new rdSGEIS must contain a necessary comparative analysis of economic benefits and job creation for New Yorkers from gas drilling compared with a robust, sustainable renewable energy program of solar, wind, geothermal and other benign, truly clean energy sources. The enormous annual amount of NYS income generated from tourism, recreation, organic farming, wineries, forestry and other sustainable industries that would bear enormous negative impacts from gas drilling must be factored into the newly commissioned expansion of the socioeconomic study, presently absent in this flawed, unacceptable SGEIS which also **omits critical information about the fiscal impact of fracking on communities in terms of nrastructure, schools, and other costs. The Governor in his State of the State speech targeted the development of the gaming industry, the “energy highway,” and rebuilding NY infrastructure. He must also lead the state and nation by prohibiting the practice of hydrofracking in NY that the SGEIS negligently fails to prove is safe and provide the answer to our NYS energy, economic and job creation needs of renewable energy development, quickly. The preservation of our natural resources and lives depend on it.**
- The dSGEIS again fatally flawed by not including a health impacts assessment. While not mandated by SEQR, the consideration of the health and wellbeing of the citizens of NYS should be foremost; keeping us safe is the mandate of the Governor. A health

assessment has repeatedly been publicly called for and directly petitioned to the Governor, NYS Department of Health and DEC by doctors, nurses, healthcare providers of every variety and by the public yet shockingly remains ignored. An assessment of possible health impacts from air and water pollution must be included in a revised SGEIS. In other areas where fracking is being used, there've been numerous cases reported and documented of negative health effects which should persuade DEC authorities that a health assessment must be part of the review. Threats to public health are among the most prominent consequences of fracking for natural gas and an assessment of them must be included in a revised SDGEIS.

- “New York State must analyze health impacts. Despite direction from the U.S. Environmental Protection Agency, calls from doctors and health professionals, and the insistence of New Yorkers, New York has failed to include an analysis of public health impacts or to meaningfully incorporate the state’s Department of Health into the fracking review. This is despite the fact that fracking-related air pollution and potential water contamination have serious effects on people—especially the elderly and children, and communities downwind and downstream of drilling operations.”²
- The Department of Health should be co-lead with the DEC in evaluating fracking in NYS, as recommended by the EPA and called for by health professionals and the public. This too has been ignored.
- Claims on page 3 that “...extensive consultations with scientists in several bureaus within the NYS Department of Health” remain unsubstantiated. FOILs from Grassroots Environmental Education to NYSDOH for such information remain unanswered. FOILs from Croton Watershed Clean Water Coalition to NYS DEC for Advisory Panel meetings information also remain unanswered.
- The Department may have “gained a more detailed understanding of the potential impacts associated with horizontal drilling” but it has ***failed to analyze full build-out cumulative impacts, another critically important fatal flaw***. A revised SGEIS must include a cumulative impact analysis of natural gas drilling in the Marcellus formation to understand the full impact drilling could have on our water resources, air quality, land and the food that is produced, forests, local roads and other public infrastructure.
- The claims that comprehensive analysis has taken place to “...identify mitigation measures that would prevent or minimize any significant adverse impacts, and identify criteria and conditions for future permit approvals and other regulatory action” are unfounded and without merit.
- This document claims that it reviewed for this revised draft “...reports and studies of proposed operations prepared by industry groups...” yet the independent and peer reviewed studies of Cornell University Robert Howarth and Others on “Methane and the greenhouse gas footprint” proving methane release into the air from gas production systems (well head, compressor stations, pipelines), Duke University Robert Jackson and Others “Methane contamination of drinking water accompanying gas-well drilling and hydraulic fracturing,” and the Hazen and Sawyer report on the impacts of fracking on the NYC watershed were largely ignored. This is egregious and reason for withdrawal of this multi flawed dSGEIS. As these peer-reviewed studies are among the very few available, they indeed should be given priority.

² Environmental Advocates, “[new york's top 10 fracking flaws and what the dec must fix](#)”

- The governor wants to let science decide the decision whether to frack or not to frack yet the DEC has ignored the science. “Perhaps, says James Northrup, a former gas industry professional, “their worst denial is using an outlier in the Duke University’s methane study (‘Methane contamination of drinking water accompanying gas-well drilling and hydraulic fracturing’) to discredit the conclusion that gas wells release gas into groundwater - up to 50% of the wells drilled within 10 years. This is no longer a matter of debate in industry circles, it’s just a matter of how much, when and how far from the well.” The authors of the Duke study wrote a successful rebuttal to the authors (who have ties to the gas drilling industry) who leveled the criticisms on the Duke study methodology, see Attachment #1. The findings of the Duke study stand and must be included in a revised draft SGEIS.
- The Department has used outside consulting firms to analyze socioeconomic impacts, and visual, traffic, and community character impacts but analysis remains grossly inadequate as full build-out cumulative impacts have not been assessed, only initial drilling and hydrofracking impact on traffic was analyzed rather than accompanying services and refracking, and critical information about the fiscal impact of fracking on communities in terms of infrastructure, schools and other costs are absent.
- Additionally, it appears that little of the 13,000 comments content has been included in this revised draft, many of which are being re-submitted.
- Furthermore, greenhouse gas emissions from hydraulic fracturing which includes fugitive methane release and their impact on global warming were not reviewed or mitigation measures and alternative renewable energies compared or recommended in their place. The recent record jump in CO2 brings new urgency to this issue, see Attachment 2.
- There is no known method to contain fugitive releases which impact global warming at many times greater than carbon dioxide. On this issue alone, hydraulic fracturing should be abandoned. Another stand alone reason to prohibit hydrofracking is contamination of drinking water, confirmed by peer-reviewed Duke study and recently in EPA’s report of aquifer water contamination from gas drilling in Pavilion, WY. Without water, we cannot survive.
- The NYS DEC mandate is to keep us safe and protected state land, forests and other natural resources. DEC Mission Statement <http://www.dec.ny.gov/24.html> "To conserve, improve and protect New York's natural resources and environment and to prevent, abate and control water, land and air pollution, in order to enhance the health, safety and welfare of the people of the state and their overall economic and social well-being."
- The mandate of a governor or US president is to keep safe its citizens. The governor and the state agency DEC must execute their mandates, first and foremost.
- The Executive Summary claims to have reviewed information and data from Pennsylvania, visited a Pennsylvania spill site and held conversations with industry and public officials. However, the presentation of this critical documentation is reduced to a bare minimum in the dSGEIS. The hundreds to thousands of Pennsylvania’s tragic spills, blowouts, fires, pipeline explosions, accidents and other incidents should be assessed and carefully evaluated how the same horrors won’t be repeated in NYS. Failure to have done so is inexcusable and alone ample grounds for withdrawing this inadequate document and issuing another revised draft following a new Scoping.

Page 4 Chapter 1 – Introduction

- The Introduction Chapter “...highlights enhanced mitigation and new precautionary measures...” These are inadequately addressed because of failure to assess cumulative impacts of full build-out, a No Action Alternative, and an analysis of gas drilling with renewable fuel production, as cited above. The best precautionary measure is the No action alternative yet this fatally flawed document dismisses this as an option because it wasn’t contained in the Scoping. SEQRA demands a no build alternative. Section 617: State Environmental Quality Review - NYS DEC: The range of alternatives must include the *no action alternative*.
- Hence, the Scoping should be revisited and a No Action Alternative included, along with comparing gas with renewable production, a health impact assessment, and any other missing issues deemed imperative by Public Comments. Another rdSGEIS should then be issued which comprehensively overcomes the numerous fatal flaws of this one.

Page 5 Chapter 2 Description of Proposed Action

- To examine only average and low potential well development while not analyzing high end development based on cumulative impacts of full build-out to determine total economic impacts and any benefits to the state also fatally flaws the document. Economic detriments to the state based on cumulative impacts of full build out plus the reduced income to the state of plummeted property values of gas leased properties and of those in foreclosure because of violation of mortgage/insurance contracts must be redrawn in a revisited SGEIS.

Chapter 3 Proposed SEQRA Review Process

- 3) Not even an individual site specific EIS should be allowed for drilling within several miles of a primary aquifer, not the stated 500 feet of the boundaries of a primary aquifer. No drilling should occur within a buffer consisting of the maximum potential length of a horizontal section (lateral) plus an additional protective mile or more from a primary aquifer.
- There should be no distinction between primary and principal aquifers. Principal aquifers are equally important to its users as primary. Each should receive exactly the same protective measures.
- 4) No drilling or individual site specific EIS should be allowed anywhere near 150 feet from a perennial or intermittent stream storm drain, lake or pond. Instead of the miniscule 150 feet buffer proposed in this flawed document, drilling should have the same protective buffer width as for aquifers.

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- 6) Hazen and Sawyer study called for a 7 mile no-drilling buffer from its infrastructure citing the fragility of its ancient aqueducts. Yet this incomprehensible dSGEIS calls for merely 1000 feet from DEP’s subsurface water supply infrastructure? 1000’ should be replaced by 7 miles.
- Regulations should be rescinded until a revisited Scoping, revised dSGEIS and Final SGEIS is issued with Regulations re-issued based upon inclusion of presently missing analyses. The public also wants hearings held to review regulations based on a revised

SGEIS and FSGEIS. The public is keenly aware of the present highly irregular and improper procedure.

Chapter 4 – Geology

- Utica Shale underlies Marcellus Shale. Extremely more severe and concentrated negative environmental and economic impacts will occur when drilling Utica under Marcellus zones that have already been drilled. The proposed drilling operation in Utica must have its own separate SEQR process but at present, under the terms of this flawed dSGEIS, drilling in the Utica shale will be allowed with virtually no review of the consequences.
- Analysis is given short shrift of the hazards posed by radioactive constituents, brine and heavy metals that are safe while buried far below Earth's surface but toxic and dangerous to the health and wellbeing of humans, animals and wildlife when drilled and brought up by drilling. The all-important issue of how and where they will be disposed of is left unresolved because there is no resolution. Until one is found, drilling cannot proceed.

Chapter 5 - Natural Gas Development Activities and High Volume Hydraulic Fracturing

- "...including the composition of hydraulic fracturing additives and flowback water characteristics." There has been no responsible, comprehensive review unless all chemicals plus their compounding formulae are known and their negative synergistic impacts analyzed.

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- Access roads through forested areas create fragmentation that thwarts integrity of forested areas to clean the water and air and creates the edge effect that invites invasive species. This examination and mitigation is missing from the dSGEIS. There has also been no attempt to estimate the cumulative cost of road damage and repair.
- Well spacing law was pushed through the NY legislature at the 11th hour of the 2008 session without public knowledge or approval. Hearings on well spacing should be held and determined by expert testimony relative to land and resource sustainability.
- Drill cuttings are being received and disposed of at three NYS landfills which are not revealed. Any receipt and disposal of drill cuttings or frack waste fluid should be prohibited until new drilling technology is developed to eliminate their introduction into our water and land. Dr. Marvin Resnikoff's September 2011 letter confirms above normal radioactive levels in drill cuttings. Exceedingly dangerous high levels of radioactivity are in frack waste fluid as cited by Dr. Marian Rose: "The information from NYSDEC which analyzed 13 sample of wastewater brought thousands of feet to the surface from drilling and found that they contain levels of radium 226, a derivative of uranium, as high as 267 times the limit safe for discharge into the environment and ***thousands of times the limit safe for people to drink*** (emphasis added). Geologists say radioactivity levels can vary across the Marcellus, but tests taken so far suggest the amount of ***radioactive material measured in New York is far higher than in many other places*** (emphasis added)." ³ Neither disposal of frack waste fluid or drill cuttings should

³ CWCWC June/July newsletter 2010, "Comments on Scoping Materials for Initial Design of EPA Research Study on Potential Relationships Between Hydraulic Fracturing and Drinking Water Resources by Marian H. Rose, PhD, Director, CWCWC," page 5

be allowed in NYS. However, Governor Cuomo has promoted a pilot program of massive receipt of frack waste fluid at Niagara Falls wastewater treatment plant whose effluent flows north to Lake Ontario, the source of drinking water for millions of people. The Governor is gravely misguided and this dSGEIS a travesty that demands withdrawal and revision.

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- The documented well casings cement failures have been referred to but not fully analyzed in this document nor stringent enough mitigation measures or alternative casing technology recommended, if possible to create. This document runs roughshod over proper environmental review, protection of natural resources and the public health.
- Cumulative impact to our finite, precious fresh water supply remains unexamined. This defect so seriously flaws this document that on this ground alone, it must be withdrawn and re-issued to reflect issues raised in public comments.
- There should be no recycling of fracking wastewater as the toxins are greatly increased so as to cause worst case scenario spills and fault migration.

Page 9 Chapter 6 - Potential Environmental Impacts

- Water resources impact. The Hazen and Sawyer study which documents hydrofracking risks to NYC water supply ought to be the model for evaluating fracking across NYS.
- No prohibition has been set forth in the document of waste pits.
- Although admission is made that cumulative impacts of water withdrawals could impact water resources, no limit on amounts of water withdrawal are proposed.
- No water supply wells should be drilled into aquifers for fracking purposes.
- Stormwater impact on water resources is underestimated, especially during rain and snowmelt events. Mitigation measures must be greatly increased in order to be adequate. Enforcement is also questionable.
- Well drilling and construction impacts on groundwater is also underestimated and under mitigated.

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- Considering that upstate NY has been hit hard in recent years – witness this past year - by increasingly powerful storms and flooding, storm water provisions in this rdSGEIS are woefully inadequate. Exceedingly serious damage from fracking could occur from heavy rains, runoffs, and washouts. Strictest provisions to contain or divert large volumes of runoff should be part of the rdSGEIS.

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- The document states that testimony from officials in 15 states say no groundwater contamination from the process of hydrofracking has occurred yet there are 1000 documented cases proving otherwise including the newly released confirmation by EPA of fracking compounds found in groundwater.
- The potential migration along fault lines of methane and other formation ingredients is ignored in this document, another fatal flaw. There is no assessment of risks posed by major fault lines. Areas near fault lines are not exempted from drilling and should be.

- Recent studies showing additional fault lines were ignored. This document uses a 1977 fault line map which indicates faults running north/south in the Hudson River Valley. Instead, recent studies and a 2008 Jacobi map shows many more fault lines in central NYS and the Marcellus area. The newer, more comprehensive maps should be used.
- The entire section on the lack of probable vertical migration of methane and frack waste to aquifers also ignores the creation of newly opened fissures and faults from the intense explosive pressure of hydrofracking and disqualifies the argument.
- Horizontal hydrofracking causes earthquakes - either indirectly via frack waste disposal wells or directly. Hence, the only economical, marginally safe way to get rid of the fracking flowback is non-existent for much of the NE. On this basis alone, hydrofracking must be abandoned.

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- It is not good enough that SEQR site-specific review will be required for disposal wells. Disposal wells are injection wells and should be prohibited in NYS because of the high probability of creating seismic activity and opening migration faults for poisoning of our aquifers and water wells. Witness recent Ohio's 4.0 earthquake in December 2011 from injection/disposal well pressure. We cannot risk harming the NYC or any other water supply infrastructure. Both the drilling itself as well as disposal wells create earthquakes, reason enough to abandon gas drilling and proceed to renewable energy exclusively.
- Mitigation measures to prevent significant adverse impacts from spills and releases are weak.

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- The document claims that NORM levels in drill cuttings are not above levels in surrounding environment. This is untrue. The already referenced September 2011 letter from radioactivity expert Dr. Marvin Resnikoff proves otherwise and must be factored into a revised dSGEIS. Dr. Marian Rose's information on high radioactive levels thousands of times above the safe limit for humans and wildlife cited above must also be factored into a revised dSGEIS.

Page 14 – Impacts on Ecosystems and Wildlife

- Partial mitigation is inadequate to counter habitat loss, conversion and fragmentation, from gas drilling, well pads, roads, pipelines and other infrastructure. Limiting the amount of gas drilling impacts is accomplished only by limiting the amount of gas drilling and vastly increasing unit spacing size. Hearings should be held on unit spacing to determine what size is sustainable, if at all.
- This document fails to include an analysis of *negative impacts upon endangered species* which *fails to comply with SEQR*.
- If introduction of aquatic and terrestrial invasive species also comes from truck trips and water withdrawals, none should be allowed. We can ill afford further release of carbon dioxide by destruction of trees formerly sequestering carbon. Trees also cool the temperature and clean the air and water. Invasive species such as Mile-A-Minute Vines strangle and kill the trees in a deep border along edges. This all impacts negatively on wildlife and ecosystems. Maintenance of unfragmented forests is critically urgent.
- Surface as well as underneath disturbance of any state owned land is Constitutionally illegal. This document must eliminate both disturbances.

Page 15 – Impacts on Air Resources

- Since a full accounting is absent of all fugitive methane from well pad, compressors stations and pipeline leaks as well as a full build-out cumulative impact on air analysis, this section lacks credibility in its air monitoring plan for adverse air quality impacts.

Page 16 - Greenhouse Gas Emission Impacts

- As stated earlier, if no full build-out cumulative impact analysis was executed and if the Cornell Study was not incorporated to the full, no mitigation measures herein recommended can be viewed as addressing the impact. If all fugitive methane leaks are not accounted for, as cited above, there can be no compliance with exceedance levels of greenhouse gas emissions as proposed in this fatally flawed document.
- The Cornell Howarth study found that no methodology exists in gas drilling technology to stem fugitive methane emissions from drill pad, compressor stations, pipelines, seams, and valves - sufficient reason to abandon this type of technology in favor of renewable energy. Our survival rests on the state fully examining and addressing these critical issues. Failure to have done so presents another major flaw and reason to withdraw this inadequate document, expand the Scoping, and re-issue a responsible, complete dSGEIS for public safety and review.

Page 17 – Socioeconomic Impacts

- As referred to earlier, the socioeconomic impact analysis in the SGEIS does not contain the newly commissioned expansion of socioeconomic impacts, again awarded to industry-biased Ecology and Environment Engineering. Additional independent expert economic testimony and studies must also be commissioned and factored into an unbiased, credible socioeconomic expanded analysis with hearings and new comment periods on Scoping and a revised SGEIS.
- SEQRA mandates that there be no segmentation which this would otherwise constitute if the present dSGEIS is allowed to stand before inclusion of the expanded socioeconomic study. Public Comment period must restart when a new, inclusive SGEIS is produced.
- “New York State must analyze fracking's true costs. Governor Cuomo and the DEC have failed to provide an analysis of the true costs of fracking for communities or the state. The DEC’s socioeconomic impact analysis omits critical information about fracking's fiscal impact on communities in terms of infrastructure, schools, and other costs.”⁴
- No assessment has been made of fracking’s impact on the expanding sustainable industries that bring very large revenues to the state. Organic farming, tourism, recreation, hunting and fishing, forestry, wineries, breweries, cheese factories and other forms of food processing are all incompatible with fracking. Many will be forced to close and leave the area if gas drilling begins. An assessment which includes a No Action Alternative would evaluate the healthy revenue stream from continuing sustainable industries, the damage costs from gas drilling, and the addition to state coffers and jobs for New Yorkers of renewable energy alternatives.
- No assessment has been made of impacts on local services and taxpayers. Road and highway department maintenance and public health, first responders, fire and police

⁴ Environmental Advocates, [new york's top 10 fracking flaws and what the dec must fix](#)

responders will be borne by local communities already hard hit. All NYS taxpayers are likely to be taxed to pay for the high damages these local communities cannot afford, environmentally or economically. This deficient dSGEIS fails to address or provide answers.

- No assessment has been made of the impact from drilling on residential property values which will also be negatively affected. Real estate agents cite a lack of interest by potential buyers in homes on or near land leased for gas production. Many local banks will not give mortgages on such properties. To sign a gas lease on a mortgaged property invalidates the mortgage. If banks should foreclose on all the mortgaged properties now leased, an enormous additional downward spiral in the housing market will occur along with decreased tax revenue to the state.

Page 18 – Visual, Noise and Community Character Impacts

- Noise and truck traffic are erroneously under reported. Only initial drilling impacts are studied while traffic from accompanying services and a wellpad’s refracking are ignored. Hence, mitigation measures are meaningless. This document needs withdrawal and serious rewrite.
- Compulsory integration is an unconstitutional taking of property rights. “unwilling landowners will be forced to sell gas resources they own to the gas industry at a time and price not of their choosing . Compulsory integration was originally designed to protect adjoining landowners from having their oil and gas taken by a well on adjacent property that taps into an undifferentiated pool of liquid or gas that underlies both properties. In this situation, compulsory integration actually protects the owners of unleased lands. But in the case of fracking, where there is no undifferentiated pool from which oil and gas may be ³stolen² from under the adjoining land, there is no good economic or legal reason for enforcing compulsory integration. In fact, the only reason for allowing this practice is for the benefit of the driller and detriment of the non-lease owner...”⁵ Compulsory Integration (CI) should be repealed in NY and a revised SGEIS reissued based on no CI.

Transportation Impacts

- It is unacceptable that this rdSGEIS states “It is not feasible to conduct a detailed traffic assessment given that the precise location of well pads is unknown at this time.” A full build-out of cumulative impacts can easily be projected given the known size of the Marcellus Shale in NYS. The number of possible well pads as presently unit spaced can be projected and hence, a detailed traffic assessment to them.
- No escrow account is required of industry to repair ruined roads.

Page 19 – Seismicity

- “...no significant adverse impacts from induced seismicity are expected to result...” from hydrofracking. This is ludicrous considering the well documented many Arkansas earthquakes near gas drilling and disposal/injection wells and the 4.0 earthquake recently in Ohio near a disposal/injection well. That this document uses outdated, scant fault line information and maps from 1977 showing major faults in NYS only along Hudson River

⁵ Sustainable Otsego, “December 2011, Summary Critique of DEC’s draft SGEIS on Fracking: Why the dSGEIS should be withdrawn and the Scoping process reopened to consider prohibition of fracking for natural gas in NYS-52 Serious and Fatal Flaws in the dSGEIS, page 3

valley rather than using 2002 Jacobi maps showing faults lines all across Central NY where drilling is proposed is reckless. A revised SGEIS must use Jacobi maps and current information.

- “Driller must shoot 3-D seismic on each lateral,” says James Northrup. “Driller must carry earthquake insurance and there should be no disposal wells in Central NY.”
- All drilling must be prohibited within at least 10 miles of any nuclear power plants.

Page 20 Chapter 7 – Mitigation Measures

- All watersheds deserve equal protection, not just NYC and Syracuse watersheds. All private water wells are unfiltered and require equal protection. A 4000’ buffer is inadequate and should be extended to the full potential length of the horizontal bore plus an additional buffer of one mile.
- To allow drilling 500 feet from a primary aquifer is wildly irresponsible and inadequate protection that begs aquifer contamination from cement casing failure and fault gas migration over years. This ludicrous rdSGEIS statement “Horizontal extraction of gas resources underneath primary aquifers from well pads located outside this area would not significantly impact this valuable water resource” must be stricken. At least the length of the horizontal bore potential plus a buffer width of an additional mile is appropriate distance from all of our eighteen primary aquifers. Such protection must also be forever rather than temporarily. We will not allow our aquifers or our watersheds providing unfiltered drinking water – the very basis of our survival - to be put at irreversible risk.

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- Horizontal extraction of gas resources underneath State owned lands from well pads outside this area would be an illegal breach of the NYS Constitution and must be prohibited.
- There should be no drilling underneath principal aquifers or within a buffer of the length of a potential horizontal bore plus an additional mile. Hence, no site-specific EIS is necessary. None of our aquifers, primary or principal, can be put at any risk whatsoever.
- The same protective distances should apply from any public drinking water supplies, not a mere 2000’.

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- Floodplains maps must be updated before any drilling permits are issued. No well pad should be situated closer than the same protective distances as cited above for any private well or domestic use spring, not the unbelievably measly 500’, an insult from the state towards all homeowners. No one’s water should have unequal protection. All deserve equal protection. The homeowner should also not have the right to waive the protective buffer restriction. If the homeowner’s water becomes contaminated and the property is abandoned, it will not be marketable and will go into foreclosure impacting the state’s tax revenue base negatively. The rest of the state taxpayers will have their taxes increased to make up the deficit.
- The public has the right to know the exact risks to which they are being subjected. Hence, there should be no exception in public disclosure of all chemicals and additives plus ‘trade secrets’ used in the fracking process.

- Adding a third cemented string casing is still cement, the part of the casing subject to failure, so this does nothing to assure prevention of casing failure and gas migration to aquifers. On Jan. 9, 2012, yet another case of failed casing was reported by Associated Press that PA DEP confirmed an improperly constructed well casing at the Cabot Oil & Gas Corp. well in Lenox Township, Susquehanna County allowed methane to contaminate the aquifer.
<http://www.pressconnects.com/article/20120109/NEWS01/120109008/Pa-DEP-Cabot-well-led-methane-water?odyssey=tab|topnews|text|FRONTPAGE>

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- Disposal of wastewater and solid waste rests upon treating these toxic wastes as industrial which instead must be defined as the hazardous waste they are. However, many of the chemicals used in fracking fluids are carcinogenic or endocrine disruptors. Their toxicity cannot be eliminated by any wastewater treatment technology available to local communities. Filtration is inadequate as it is unable to screen out the many toxic chemicals in fracking fluids and the radioactivity and heavy metals and brine in frack waste. The inability to protect the public against these chemicals entering ground water and drinking sources is an argument sufficient to justify the prohibition of fracking for natural gas in NYS.
- Spreading brine frack waste over roads must be prohibited yet is not in this grossly inadequate SGEIS.
- The issue of endocrine disruptors among fracking chemicals is also ignored. Peer-reviewed studies by Dr. Theo Colburn at the Endocrine Exchange, and by Dr. Adam Law of Physicians, Scientists and Engineers for Healthy Energy, as well as others, document that these chemicals, unlike others, are extremely toxic at very small rather than large doses. An SGEIS that provides no resolution for safe disposal of drilling wastes is an SGEIS fatally flawed mandating its withdrawal and prohibiting hydrofracking for natural gas in NY.
- No part of the disposal responsibility should be left to industry but instead overseen and enforced by the Department. Greatly expanding the Department would be needed to oversee gas drilling.

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- To maintain the imperative integrity of forest and grassland, no intrusion into 150 acres of forest or 30 acres of grassland should be allowed, no site specific EIS to do so.
- To effectuate what is proposed for Other Control Measures in addition to all the other staff requirements as proposed in the rdSGEIS to review and enforce gas drilling, the Department would need to be tripled in size for such accommodations.

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- Its use of less pristine, finite fresh water would be advantageous but the use of recycled frack waste is highly debatable to allow such concentrated waste injected into the earth and would need a separate investigation and hearings to prove its allowance.
- There is no requirement for industry to pay for repairing damaged roads and there must be. Towns, counties and the state cannot support such costs.

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- No amount of well pad reduction of drilling at one time can lessen the impact on tourism and subsequent reduction of income to the state. Comparisons of income lost from sustainable industries with the amount gained from gas drilling should have been drawn in a more detailed and accurate socioeconomic study.

Chapter 8 – Permit Process and Regulatory Coordination

- Towns should have control over the use of their own municipalities and the natural resources therein, not usurped by oil and gas operations. This is a home rule state. This dSGEIS fails to provide for an enhanced role for local governments to prohibit gas development that is incompatible with local land-use and zoning regulations.

Page 27 Chapter 9 – Alternative Actions

- A No-Action Alternative was excluded from the Scoping process because no economic benefits would accrue. However, a complete economic analysis remains undone to prove that a positive rather than negative costs and harms net benefit would occur. This is a fatal weakness of the DSGEIS in prejudging the issue of the value of oil and gas production and renders objections irrelevant. This is irresponsible and calls into question the credibility of the review process.

Page 28 – Chapter 10 - Non Routine Incidents in Pennsylvania

- Only very few and not all of the negative impacts in Pennsylvania that are likely to occur in NY were reviewed, an egregious omission requiring that this document be withdrawn and returned to the drawing board after reopening the Scoping to include a No Action Alternative.

Page 29 – Next Steps

- No next step of proceeding to the FinalSGEIS should occur without reopening the Scoping to include an unbiased and non-prejudged examination of a No Action Alternative as called for by SEQRA and thence to reissuing an improved rdSGEIS complete with a health risks assessment, a comparison of energy production of renewable and methane fuel, the expanded socioeconomic study, and all other imperative, missing ingredients called for by Public Comments.
- As Albany environmental groups agree, this revised draft SGEIS to guide high-volume gas development, if it's permitted, is in no way strong enough to protect New York's waters, air, land and communities. The DEC must fix and reissue the SGEIS after reopening the Scoping and analyzing a No Action Alternative. Withdraw this staggeringly flawed SGEIS, revisit and expand Scoping with a No Action Alternative and issue another revised SGEIS with hearings and public comment periods. Let's get it right next time around or else not go forward at all and prohibit this dangerous, genocidal practice right now.

High Volume Hydraulic Fracturing Proposed Regulations

High volume hydraulic fracturing regulations of gas drilling were prematurely issued and must be withdrawn. Regulations are what govern rather than the SEQR process which merely recommends. Gas drilling regulations were never issued following the 1992 GEIS. The purpose of the SGEIS is to determine whether to permit this type of extraction and how. To issue the regulations before the SGEIS is finished reveals that NY's decision has already been made to frack and that the testimony of experts and the public do not matter. The present inadequate, incomplete draft regulations must be withdrawn and greatly expanded based upon a redone, proper EIS review. The Scoping first must be reopened and a No Action Alternative considered. A newly revised draft SGEIS must then include a No Action Alternative, full cumulative impacts assessment, health assessment, comparative assessment of oil and gas production with renewable energy production to determine what is in the best public interest, the recently commissioned expanded socioeconomic study by Ecology and Environment Engineering and other independent economists, in addition to correction and inclusion of all the other major flaws addressed in these Public Comments. After a new SGEIS Public Comment period and DEC release of a Final SGEIS, regulations must then be issued, according to proper procedure.

Issues of setbacks in the regulations are bizarrely irregular reflecting sheer political science rather than real science. These Regulations must be rewritten in a scientific way based upon science that must be included - rather than excluded as in the present SGEIS - in a revised Scoping and rdSGEIS.

There has been no attempt in the rules to assess the impact drilling would have on residential property values and no assessment of risks posed by major fault lines. The public has the right to review comprehensive draft regulations. Were the state respectful of the public's right to fully understand regulations that could have enormous impact upon their lives, public hearings should also accompany expanded, more complete draft regulations. Anything less is seen as the state's intention to short shrift the review process and deny the public of their rights. We also urge the state agency to keep withdrawn its draft regulations until it can fulfill its mission of protecting the state's natural resources that is clearly not at all proven in the SGEIS or regulations.

Yours truly,

Suzannah Glidden, Director

Cc: Mr. Joe Martens, Commissioner, NYS DEC
The Honorable Andrew Cuomo, Governor of NYS
Mr. Eric Schneiderman, Office of the Attorney General
Dr. Shah, Commissioner, NYS Department of Health
NY State Majority Leader Dean Skelos
Assembly Speaker Sheldon Silver
Senator Greg Ball
Assemblymember Steve Katz