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FOR THE ENVIRONMENT



www.citizenscampaign.org

□ 225A Main Street • Farmingdale, NY 11735

516-390-7150

□ 19 Court Street, Lower Level • White Plains, NY 10601

914-997-0946

□ 744 Broadway • Albany, NY 12207

518-772-1862

□ 735 Delaware Road, Box 140 • Buffalo, NY 14223

716-831-3206

□ 466 Westcott Street, 2nd Floor • Syracuse, NY 13210

315-472-1339

□ 129 Church Street, Suite 221 • New Haven, CT 06510

203-785-9080

Empowering Communities, Advocating Solutions.

December 31, 2009

ATTN: dSGEIS Comments
Bureau of Oil & Gas Regulation
NYSDEC Division of Mineral Resources
625 Broadway, Third Floor
Albany, NY 12233-6500.

Dear NYS DEC Bureau of Oil & Gas Regulation:

Citizens Campaign for the Environment (CCE) is an 80,000 member non-profit, non-partisan advocacy organization working to empower communities and advocate solutions that protect public health and the natural environment. CCE appreciates the opportunity to offer comments on the draft Supplemental Generic Environmental Impact Statement on Oil, Gas, and Solution Mining in New York State (the Supplement).

CCE has studied the environmental and public health issues surrounding “hydro-fracking” for over two years and has actively participated throughout the duration of the review process, including providing testimony and formal comments on the scope of the Supplement. CCE testified at two DEC formal public hearings, co-sponsored educational forums in locations that had no formal DEC public hearing, and has been discussing the Supplement with our members and the public.

CCE has found overwhelming public concern with the Supplement and its lack of protection for New York’s water, air, land, and people. More than 15,000 citizens signed petitions expressing specific concerns with the lack of disposal solutions for the volumes of toxic, caustic, and radioactive liquid waste; the absence of cumulative impact assessments for air and water quality; and the need to ban hydro-fracking in sensitive watersheds, including, but not limited to unfiltered drinking water supplies and sole-source aquifers. More than 1,200 citizens wrote individual comments expressing their personal concerns with the shortcomings of the Supplement.

The specific concerns raised with the Supplement’s shortcoming are compounded by the lack of federal environmental protections, the forthcoming EPA drinking water and hydro-fracking study, and lack of interagency cooperation. ***CCE and our members respectfully request a moratorium on permitting hydro-fracking to provide adequate time for legislators and***

regulators to ensure New York's natural resources, private property, and tax payers are protected from potentially disastrous consequences of hydro-fracking.

CCE believes that a moratorium is a reasonable course of action given the numerous unanswered concerns being raised across the state. The supplement states on page 6-56: "Given that NYS Marcellus Shale is in the early stages of development, common practices for water handling have not been developed..." *CCE believes that since high volume hydraulic fracturing is in its infancy there should be no rush to use controversial drilling methods.* Pennsylvania welcomed hydro-fracking prior to establishing a clear and accountable process for properly managing, storing, transporting and treating the volumes of liquid waste generated as a by-product and is facing several challenges as a result. New York can and should learn from her neighbors.

CCE questions if a generic environmental impact statement is appropriate to regulate hydro-fracking in New York's shale formations. Each well is drilled with a specific chemical cocktail, dependent upon the shale's specific geology and the individual drilling company's recipe. A GEIS prevents the public from providing meaningful opportunities to participate in a process that can significantly alter the landscape, damage drinking water sources and will industrialize New York's rural landscape.

CCE has the following general comments on the document:

1. The document is significantly deficient, it should be withdrawn, and a moratorium needs to be enacted. This will allow New York time to develop comprehensive regulations for the natural gas industry and provide a clear plan for disposal of waste and protection of New York's land, air and water. *The Supplement fails to adequately produce a clearly articulated set of regulations.* These critical components are a necessity for planning, and cannot be viewed as an add-on to the process as it advances.
2. CCE believes the following findings from the 1992 GEIS should be amended in the context of the Supplemental Generic Environmental Impact Statement:
 - a. "...issuance of a an oil and gas drilling permit for a surface location above an aquifer is also a non-significant action, based on special freshwater aquifer drilling conditions implemented by the Department." *CCE does not agree that drilling above an aquifer is a non-significant action, even with special freshwater aquifer drilling conditions. Hydro-fracking should not occur on a freshwater aquifer.*
 - b. "The only instance where issuance of an individual permit to drill an oil and gas well is always significant and always requires a Supplemental Environmental Impact Statement is when the proposed location is within 1,000 feet of a municipal supply well." *CCE agrees that these should have individual permits and believes that the DEC assertion in 1992 that drilling in State Parklands "may be significant" is incorrect and should also require an individual permit.*

CCE has the following specific comments to make on the document:

1. **Increased interagency consultation and coordination is needed.** CCE applauds the NYS DEC's Bureau of Mineral Resources (DEC DMN) for consulting with the New York State Energy Research and Development Authority (NYSERDA), New York State Department of Health (NYS DOH), NYS DEC Climate Change Office, NYS DEC

Division of Environmental Permits, NYS DEC Division of Fish, Wildlife, and Marine Resources, NYS DEC Division of Solid and Hazardous Materials, NYS DEC Division of Water. *However, CCE is deeply disappointed that the Supplement did not include consultation and coordination with the NYS Department of Public Service, the New York State Environmental Facilities Corporation, the Office of Parks, Recreation and Historic Preservation, New York State Department of State and all members of the New York Ocean and Great Lakes Ecosystem Conservation Council.*

2. **Hydro-fracking activities include additional site-specific impacts, and are not solely limited to generic impacts.** The Supplement states on p. 1-3: “When a final generic environmental impact statement has been filed, ‘no further SEQR compliance is required if a subsequent proposed action will be carried out in conformance with the conditions and thresholds established for such actions’ in the generic environmental impact statement.” *This statement indicates that solely generic impacts exist, however the Supplement relies heavily on industry preferences and industry disclosure, the specific geology of the shale, location of the well site, different chemicals to be used, location of water, etc. These are all site-specific impacts that either need to be addressed individually or rules promulgated to streamline these impacts.*

CCE Comments regarding Chapters 1-3 of the Supplement

3. **Site-specific SEQRA determination should occur for drilling on public lands and within 2,000 feet of any drinking water supplies.** The Supplement states on p. 1-3: “However, the Department also found in 1992 that issuance of a drilling permit for a location in a State Parkland, in an Agricultural District, or within 2,000 feet of a municipal water supply well, or for a location which requires other DEC permits, may be significant and requires a site-specific SEQRA determination...the only instance where issuance of an individual permit to drill an oil and gas well is always significant...is when the proposed location is within 1,000 feet of a municipal water supply well.” *CCE disagrees with this statement. CCE believes that public lands and municipal and private drinking water supplies require a site specific SEQRA determination because of the large footprint of high volume hydro-fracking, especially in concert with horizontal well drilling and multi-well pads. Further, all water supplies should be evaluated within 2,000 feet.*
4. **Private well set backs should be at 2,000 feet.** The Supplement states on p.2-24: The GEIS “proposes a 150-foot setback to protect vulnerable private wells” As stated previously, the footprint associated with horizontal high volume hydro-fracking is greatly increased from conventional vertical wells. *Private wells must be protected by a minimum setback of 2,000 feet*
5. **Provide the people a voice in drilling on public lands.** The Supplement states on p.3-2: “The Department also evaluated the action of leasing of state land for oil and gas development under SEQRA and found no significant environmental impact associated with that action. Lease clauses and the permitting process with its attendant environmental review mitigate any potential impacts that could result from a proposal to

drill” *CCE finds this statement non-sensical. The purpose of generating a GEIS is to comply with state law when it is determined that adverse impacts may occur with an associated action. Is the Supplement implying that State lands will magically be immune to these adverse impacts? While private land development of oil and gas theoretically rests on the assumption that an individual has leased their land, the leasing of state lands implies that all residents of New York State believe that the people’s lands should be used for oil and gas development. Since that is clearly not the case, state lands should be reviewed on a case by case basis and not be subject to the minimal review offered by a generic environmental impact statement.*

6. **Control spread of invasive species.** The Supplement states on p. 3-11: “A map (1:24,000) showing all occurrences of invasive species within the project site must be produced and include with the survey as part of the EAF Addendum.” *CCE agrees that invasive species should be mapped, however the Supplement fails to provide adequate regulations and controls to prevent the transport of invasive species. While the proposed EAF Addendum does “require affirmation” of invasive species mitigation, the Supplement should clearly identify what those mitigations must entail.*
7. **Public consultation on drilling in proximity to water supply wells.** The Supplement states on p. 3-13: “The Department will continue to exercise its discretion regarding the applicability to other public supply wells (i.e., community and non-community water supply system wells) when information is available.” *CCE specifically requests that the public have an opportunity to be consulted and to review and comment on the proximity of hydro-fracking to the public’s water supply well.*

CCE Comments regarding Chapter 5 of the Supplement

8. **Establish a process for public intervention regarding unforeseen adverse impacts from hydro-fracking activities.** The Supplement states on p. 5-27: “To prevent operators in New York from holding acreage within large spacing units without fully developing the acreage, the Environmental Conservation Law requires that all horizontal wells in a multi-well shale unit be drilled within three years of the date the first well in the unit commences drilling.” *While it is understandable to place a time restriction on a unit in order to expedite the process of gas recovery and conduct site remediation, the stated policy raises the issue of how the public can intervene and appeal a fast-tracked gas development process if unforeseen and unanticipated problems arise. The Supplement should identify the process if a company is alleged to be violating environmental safeguards.*
9. **Cumulative impacts must be assessed and mitigated.** The Supplement states on p. 5-28: “As development in a given area matures and the results become more predictable, the frequency of drilling and completing all wells on each pad with continuous activity in a single mobilization would be expected to increase.” *This statement infers that the DEC is expecting for development to occur in concentrated areas. Therefore, the DEC should use these assumptions to state how cumulative impacts will affect the areas and how the DEC expects to mitigate these impacts. CCE believes it is reasonable for the*

energy companies to provide more specific scenarios of the number of wells at each pad so that DEC may better assess water use, and wastewater storage and disposal needs. It is also reasonable for the DEC to provide some numerical thresholds for wells per pad where impacts and activities may exceed local and state resources.

- 10. Reserve Pit inspection, standards, and contents.** The Supplement states on p. 5-29: that “fluid associated with each well would have to be removed within 45 days of the cessation of drilling operations, unless the operator has submitted a plan to use the fluids in subsequent operations and the Department has inspected and approved the pit.” *CCE requests the DEC to respond to the following questions:*

 - a. What fluids would be permitted for subsequent operations?*
 - b. When would the DEC inspect the pit and what is the approval process/criteria?*
 - c. What are the standards for approval?*
 - d. How often will the DEC monitor and inspect these pits?*

- 11. The use and characterization of Drilling Mud.** The Supplement states on p. 5-29: according to Operators drilling mud using water-based, potassium-chloride/polymer-based with a mineral oil lubricant, or synthetic oil-based can be used after the fresh water aquifers are sealed behind cemented surfaces. *Is the use of chemicals limited until after the freshwater aquifers are sealed? This is not clear in the Supplement. Again, CCE believes the DEC should clearly articulate its regulations in order to provide the greatest transparency and assurances that the strictest environmental considerations are implemented.* Additionally, this section goes on to state that “synthetic oil-based muds are described as ‘food-grade’ or ‘environmentally friendly’” *Whose description is this? The industry or the DEC? Will the DEC vet these chemicals? Will the public weigh in on what chemicals will be used? How will this information be disseminated to local officials, watershed watch groups, DEC Division of Water, NYS Department of Health, Legislators, and of course the public? Will this information be publicly disclosed on permits and subject to public comment during the SEQOR process?*

- 12. Mandate Closed Loop Mud Systems.** The Supplement states on p. 5-29: “Some drilling rigs are equipped with closed-loop tank systems, so that neither used mud nor cuttings are discharged to reserve pits.” *This appears to be the most environmentally protective method. Why is it not required by the DEC? CCE believes that all “mud systems” should be closed-loop as the technology is already available.*

- 13. Disclosure of all chemicals** (p. 5-35) CCE applauds the DEC for seeking out and disclosing information regarding chemicals from the gas companies and suppliers. In addition, CCE agrees that MSDSs are public information and are ineligible for exception as trade secrets. While this is an excellent first step- this does not reflect a comprehensive list of chemicals. *CCE urges the DEC to require all chemicals be evaluated and publicly disclosed. Furthermore, during the permit process for a well, the chemical make-up must be disclosed to the public, local officials, NYS DOH, NYS DEC Division of Water, and a clearly articulated plan for disposal must be included in each permit.*

14. **Develop a chemical criteria plan.** On p. 5-41 of the Supplement in the discussion of the Properties of Fracturing Fluids. The dSGEIS states that the “desired properties and characteristics include: non-reactive, non-flammable, minimal residuals, minimal potential for scale or corrosion, low entrained solids, neutral pH for maximum polymer hydration, limited formation damage, appropriately modify properties of water to carry proppant deep into the shale, economical to modify fluid properties, minimal environmental effects.” *Are these desired properties used as a gauge for what chemicals will be used? CCE urges the DEC to clearly propose a chemical criteria plan, subject to public review and comment, for what is allowed to be used in New York State for drilling.*
15. **Full public disclosure of fracturing fluid composition.** The Supplement states on p. 5-43: “The composition of the fracturing fluid used may vary from one geologic basin or formation to another in order to meet the specific needs of each operation...” *The DEC should require full public disclosure of all fracturing fluid composition CCE believes that if the composition of the fracturing fluid must be adjusted for geologic basins, then fracturing fluids for each well must be publicly disclosed as a condition of approval of each well permit.*
16. **Fracturing fluid formulations exist and should be reviewed.** The Supplement states on p. 5-44: “Even though no horizontal wells have been drilled in the Marcellus Shale in New York, applications filed to date indicate that it is realistic to expect that the composition of fracture fluids used in the Marcellus Shale would be similar from one operation to the next.” This implies that several formulations exist and should be reviewed, assessed, and publicly disclosed by the DEC. *Furthermore, the dSGEIS goes on to state “One potential exception is that additional data provided separately to the Department indicates that biocides have comprised up to 0.03% of fracturing fluid instead of 0.001%...” This increased concentration of biocides illustrates DEC knowledge of fracturing fluid composition.*
17. **Spill reporting, enforcement, and oversight.** The Supplement states on p. 5-74 that spills of a “reportable quantity” must be reported within 2 hours unless the spill is contained by a secondary containment within 24 hours and the entire volume is recovered. *CCE respectfully requests the DEC define the term “reportable quantity.” CCE seeks clarity on how the determination is made whether or not the spill is cleaned up within 24 hours and what happens if a spill is not contained within 24 hours? CCE urges the DEC to mandate that all spills be reported, well documented, made publicly available, and inspected. Clear guidelines for spill reporting must be established, regardless of whether or not the spill could cause a fire or if it can be completely contained. Furthermore, the DEC should establish and publicize a ‘drill spill’ hotline to empower the public to report signs of illicit discharges downstream.*
18. **Ban sharing of freshwater impoundments.** The Supplement states on p. 5-77: “It is not anticipated that a single centralized impoundment would service wells from more than one well operator.” CCE urges the *DEC to prohibit the use of freshwater at an impoundment from more than one operator rather than speculate on whether or not*

this will happen. In order to clearly document and track source water withdrawals and its use, the DEC must restrict water sharing between companies and operators.

19. **Permit all impoundments.** p. 5-80: Permit Applicability: CCE urges that the DEC, *regardless of the size of a freshwater impoundment for use by an oil and gas company, require the industry to obtain a permit. CCE opposes any permit exemptions for the use of water for commercial purposes.*
20. **Critical information for freshwater impoundment permits.** The Supplement discusses on p. 5-83: Additional Information in the permit application. *CCE urges that additional information on the permit application for construction of a freshwater impoundment also must include the source of the water, certification that it has been tested for aquatic invasive species, and plans for transportation both to the impoundment and from the impoundment to the water pad.*
21. **Public review on departmental considerations on proposed impoundments.** (p. 5-84) CCE urges that the DEC provide *departmental considerations on impoundments for public review and comment during the permitting process to ensure that the water of the State of New York is being used in accordance with these parameters. Additionally, these parameters should be included in the permit itself to ensure the permittee is considering its impact upon the waters of the state.*
22. **Define ‘Unreasonable and Unnecessary Damage.’** The Supplement states on p. 5-85: “The basis for the issuance of a permit will be a determination that the proposal...will not cause unreasonable, uncontrolled or unnecessary damage to the natural resources of the state.” *What is unreasonable and unnecessary damage? CCE respectfully requests that this term be defined as well as the process for how this term is assessed and the DEC identifies the party responsible for making the determination that damage is unreasonable and unnecessary.*
23. **Frequency and characterization of inspections.** The Supplement states on p. 5-87: that all impoundments are subject to inspections by the DEC. *However, what is not clear is how often these inspections will be made. Additionally, what will happen with the results of those inspections? CCE believes it is reasonable for the public to understand the frequency and characterization of the on-site inspections, especially in light of the limited DEC enforcement personnel.*
24. **Require on-site storage of flowback liquid in tanks.** The Supplement states on p. 5-101 in regards to handling of flowback water on-site: “...the Department proposes to require tanks for on-site handling of flowback water unless compositional data is collected and provided on a site-specific basis to support an alternate proposal.” *CCE urges the DEC to require tanks for handling of flowback water with no exceptions for storage of flowback liquid in on-site open pits. CCE believes that if the DEC proposes an alternate storage method, that method must be subject to public review and comment.*

25. **The Role of Marcellus Shale Committee and the Appalachian Shale Water Conservation and Management Committee.** The Supplement on p. 5-102 states: “The Department anticipates that, by the time the final SGEIS is published, additional data and analyses will be made public by the Marcellus Shale Committee and the Appalachian Shale Water Conservation and Management Committee. Because of the limited availability at this time of flowback water quality data, conservative and strict mitigation measures regarding flowback water handling are proposed in Chapter 7, and additional data will be required for alternative proposals.” *CCE specifically requests clarification as to how the DEC intends to use the data from the Marcellus Shale Committee and the Appalachian Shale Water Conservation and Management Committee? Will this information be integrated into New York’s standards? As the DEC learns more about flowback water will it reissue rules related to treating and handling flowback? Will those be subject to public review and comment?*
26. **Utica Shale flowback liquid is not adequately considered.** The Supplement states on p. 5-105: “All information is for operations in the Marcellus Shale.” *CCE is deeply concerned that the DEC has proposed a Supplement to a Generic Environmental Impact Statement to include hydro-fracking to recover natural gas from all of New York’s low permeability shales but failed to adequately analyzed flowback water from other shale formations including Utica Shale.*
27. **On-site treatment techniques must be discussed and explored.** The Supplement states on p. 5-114: “Some form of physical and/or chemical separation will be required as a part of on-site treatment.” *CCE is concerned that that specific treatment techniques are not fully discussed. Specifically, CCE requests to know what process(es) will be used for separation? Will additional chemicals be used in this process? How will the treatment techniques be approved? What will be done with the residuals removed?*
28. **On-site treatment units must be subject to public review and comment.** The Supplement states on p. 5-114: “Modular physical and chemical separation units have been used in the Barnett Shale and Powder River Basin.” *Are these units being proposed for use in New York? What is the permitting process for using these units? How will the public review and comment on the safety of these units? How effective are these units?*
29. **New chemicals should be subject to regulatory and public review.** The Supplement states on p. 5-114: “Service companies and chemical suppliers may develop additive products that are more compatible with the aforementioned flowback water parameters.” *New chemicals introduced must be subject to additional environmental and public review.*
30. **No open flowback liquid cesspool storage.** (p. 5-115: Centralized Storage of Flowback Water for Dilution and Reuse) *Flowback water must be stored in tanks both on-site and off-site. The threats posed to the environment from flowback water cannot be left to chance from open lagoons. The radioactive nature of flowback and the chemical composition of the flowback as acknowledged in the dSGEIS leaves no option for open*

pit lagoons, under any circumstances.

- 31. Residual disposal protocol.** Most of the on-site treatment technologies discussed in Chapter 5 refer to residuals that will need to be disposed of. The Supplement, p. 5-125 states “URS Corporation reports that residuals disposal from the limited on-site treatment currently occurring generally consists of injection into disposal wells.” *It is not clear from the dSGEIS how these residuals will be treated and disposed. CCE requests clarification of the following questions:*
- a. *How are these wells regulated?*
 - b. *Are other disposal options under consideration?*
- 32. Testing radioactivity and ensuring proper disposal of drill cuttings.** The Supplement discusses on p. 5-120 that on-site burial of cuttings will be allowed, dependent upon whether or not the drilling was done with air or freshwater versus polymer- or oil-based muds. Polymer- or oil-based muds cannot be disposed of on-site. However, the dSGEIS goes on to say that “Operators should consult with the landfill operator and with the Division of Solid and Hazardous Materials on a site-specific basis regarding landfill options relative to measured NORM levels in the cuttings.” CCE is concerned that the DEC would permit the on-site burial of materials with elevated NORM levels. *CCE seeks clarity on what radioactive levels trigger hazardous waste determination. CCE respectfully requests the DEC address the following questions:*
- a. *What party is responsible for testing the cuttings?*
 - b. *What party verifies the tests?*
 - c. *Will the DEC split the samples?*
 - d. *How are those determinations disclosed to the public?*
- 33. Ban on-site burial of Pit Liners.** (p. 5-121: Reserve Pit Liner) *CCE urges the DEC to prohibit companies from burying pit liners on-site.*
- 34. Flowback liquid disposal options.** The Supplement includes disposal options for flowback liquid, which include injection wells, municipal sewage treatment facilities, and out-of-state industrial treatment plants. *CCE is concerned with the lack of a clear and accountable plan to assure proper treatment and disposal of flowback liquid waste. CCE requests the DEC provide clarification to the following questions:*
- a. *Municipal Sewage Treatment Facilities-* The Supplement lists potential municipal treatment plants but fails to identify which municipal sewage treatment facilities can properly treat flowback water. CCE recognizes that the DEC has quantified NY’s wastewater treatment needs to exceed \$38 billion over the next 20 years. What upgrades to municipal treatment plants would be needed to handle liquid waste byproducts from hydro-fracking? What party will be responsible for paying for these upgrades? If the Supplement cannot currently identify which treatment facilities will be utilized it can, at a minimum, identify a process for upgrading, selecting, and monitoring facilities when they are chosen.
 - b. *Out-of-state industrial treatment plants-* Following the issuance of the Supplement, the Pennsylvania Department of Environmental Protection drastically reduced the quantity of hydro-fracking liquid waste accepted at

treatment plants due to significant concerns. What assurances does the DEC have that out-of-state industrial treatment plants will be able to handle volumes of liquid waste produced if hydro-fracking was to commence in New York? Will the DEC require energy companies to negotiate long term contracts for disposal to avoid the scenario that occurred in PA? What protections will New York put in place to ensure that out of state facilities do not agree to dispose of wastewater and then change the agreement leaving New York to deal with this wastestream without an approved plan?

- c. *Underground injection control (UIC)*- the federal UIC program currently exempts the waste from oil and gas drilling from regulation. While the DEC's SPDES permit would regulate some waste, how will New York regulate UIC and address the regulatory discrepancy for UIC? CCE is concerned with New York State permitting underground injection and believes that at a minimum, UIC should be prohibited until oil and gas drilling waste is regulated by federal UIC program.
35. **Partial Site Reclamation enforcement and public review.** The Supplement discusses Partial Site Reclamation on p. 5-127. CCE requests the DEC provide additional information and responses to the following questions: *What is the timeline for reclamation? What is the public review and comment process for site reclamation? What is tested for to determine that a site is not contaminated and to ensure that the gas company is held liable for any contamination and clean-up.*
36. **Brine Disposal.** The Supplement discusses on p. 5-131 that the 1992 GEIS allows brine to be disposed of in injection wells, treatment plants, and road spreading. *Recognizing that Marcellus Shale brine has Radium-226 levels that exceed EPA Safe Drinking Water levels, it is currently reasonable to assume this brine will not be treated in publicly owned treatment plants. CCE opposes permitting production brine positive for radioactivity from being spread on roads, due to its propensity to run-off to waters of the State and sources of drinking water during wet weather events. Additionally, as previously noted, federally controlled UIC programs exempt waste from oil and gas programs, and CCE strongly opposes underground injection control in New York State until industry exemptions are repealed.*

CCE Comments regarding Chapter 6 of the Supplement

37. **Protect NY's water quantity in each watershed.** The Supplement states on p. 6-10: "The percentage of water withdrawal specifically for horizontal well drilling and high volume hydraulic fracturing also is expected to be relatively low, compared with existing everyday consumptive water losses." *CCE is concerned that DEC is not considering the cumulative impacts from water withdrawals. New York State laws governing water withdrawal are inconsistent across the state. In particular, CCE questions that if the DEC does not know the rate at which gas drilling will occur, how can DEC reasonably assume to know the percentage of water withdrawal usage? Additionally, the statement '...is expected to be relatively low' is overly broad and does not consider water withdrawal as a whole over the state or in a particular watershed. It is reasonable to assume that if gas drilling is concentrated in certain parts of the state, for instance in*

close proximity to pipeline infrastructure, that hydro-fracking water withdrawals could disproportionately affect those watersheds.

38. **Flowback liquid composition and testing.** The Supplement states on p. 6-18: “The quality and composition of flowback from a single well can also change within a few days after the well is fractured.” It is unclear how often DEC will be requiring the testing and reporting of the composition of flowback liquid. *What frequency will the DEC require testing of flowback to ensure that it is being treated and disposed of properly? What happens when flowback composition changes so dramatically as to render it untreatable or untreatable at its intended destination? Will the DEC require a “plan B” and “plan C” to address changes in flowback composition?*
39. **Hazardous waste determination for hydro-fracking byproducts.** The Supplement on p. 6-38 states that drilling and fracturing fluids, mud-drilled cuttings, pit liners, flowback water and produced brine are classified as non-hazardous industrial waste. *CCE is concerned that the DEC can make this universal declaration without requiring testing of the composition of radioactivity and toxicity of hydro-fracking waste by-products. CCE disagrees that frack fluid, cuttings, flowback water, and production brine can categorically be classified as non-hazardous waste. There are known toxic chemicals used in the drilling process, and production brine has been shown to exceed EPA Safe Drinking Water Act radiation levels. CCE respectfully requests the DEC to reconsider this assumption and require testing of hydro-fracking waste byproducts to assure proper disposal of hazardous and non-hazardous waste.*
40. **Ban flowback surface impoundment pits.** The Supplement states on p. 6-38 that “The Dam Safety Regulations...only apply to fresh water surface impoundments and, therefore, would not apply to flowback water surface impoundments.” *CCE is concerned about the potential risk posed by overflowing, leaking, or damaged open storage lagoons of hydro-fracking liquid waste byproducts. As previously stated CCE urges flowback surface impoundments to be banned. All flowback water should be contained in tanks, both on-site and off-site.*
41. **Illegal discharge enforcement and reporting.** The Supplement states on p. 6-39: “Direct discharges of fluids onto the ground or into surface water bodies from the well pad are prohibited.” *CCE supports this prohibition, as it is consistent with the Clean Water Act, however, CCE seeks additional clarity on how DEC intends to regulate the potential for direct discharges and ensure that direct discharges do not occur. How frequent will sites be inspected? Will these inspections be unannounced? What is the role of the public in assisting the DEC in being made aware of potential illegal discharges? How does the public report an illegal discharge? What is the process, and how many staff are required by the DEC to investigate alleged illegal discharges?*
42. **Questioning the treatability of flowback liquid.** The Supplement states on p. 6-39: that “treatability of flowback water is of further concern.” *If the DEC is aware of the complications from treating flowback water, why are municipal treatment facilities offered as an option for treatment? As stated above, this option may not be available.*

What testing will be required to assess the treatability of the variable composition of flowback liquid?

43. **Disposing liquid waste in wells.** The Supplement discusses disposal wells on p. 6-40: *CCE agrees that disposal wells require site-specific review, however it is unclear how the underground injection in disposal wells will be regulated, as previously discussed. Additionally, CCE requests the DEC to provide an opportunity for public review and comment regarding permitting a disposal well. CCE believes the public should be aware of the injection of flowback water into the ground and have access to a clear process to hold the industry accountable liquids migrate out of the disposal well.*
44. **Disposal plan for drill cuttings with potentially elevated NORM levels.** The Supplement states on p. 6-40: “NORM levels in cuttings are not likely to pose a problem” in regards to solids disposal. *CCE believes that DEC must be prepared to address proper disposal if or when NORM levels do pose a problem. What does the DEC propose to require companies to do with the cuttings if the levels are above background levels?*
45. **Strict enforcement and clear regulations are needed to protect drinking water sources.** The Supplement discusses the potential for: Degradation of New York City’s Drinking Water Supply on p. 6-41. *While CCE appreciates the time and attention the DEC has spent attempting to allay the concerns surrounding degradation of New York City’s drinking water the assumption lies in the fact that spills will be properly contained, reported, and inspected, as well as relying on false assumptions from Chapter 5 that drinking water has not been contaminated from hydro-fracking activities. In fact, families have suffered from drinking water contamination linked to hydro-fracking activities, as evidenced by the class action case against Cabot Oil operations in Dimock, Pennsylvania. The mounting evidence against the gas companies from across the country does not support the DEC’s claim that no contamination has occurred. CCE finds the assumption of protection of drinking water in Chapter 6 rests upon best-case scenarios, the goodwill of a gas company to protect people’s water, and compliance with a Stormwater Prevention Plan. CCE is concerned that these assumptions may prove false in reality. If it were the intent of a gas company to behave in the best interests of the people they would not be in Washington D.C. lobbying against compliance with federal environmental statutes. The gas industry is seeking to protect their own interests and exploit the natural resources of the people of the State of New York and it is the role of the DEC to assure strict enforcement and crystal clear requirements to protect ALL of our drinking water sources. CCE is urging the DEC to NOT assume the gas industry’s primary interest is to protect the people of New York’s drinking water.*
46. **Flood plain protection.** The Supplement states on p. 6-42: “Local and state permitting processes that govern well development activities in floodplains should consider the volume of fluids and materials associated with high-volume hydraulic fracturing and the longer duration of activity at multi-well sites.” *CCE is concerned with development of drilling activities in flood plains, since these areas are ecologically designed to manage excess stormwater. CCE requests that the DEC clearly and comprehensively discuss*

other state permitting processes involved in siting gas well developments on floodplains. CCE believes that Supplement should clearly state that since there are hazards to developing a gas well in a floodplain then additional controls should be in place or, preferably, not occur at all. At a minimum, CCE respectfully requests the DEC clearly articulate guidelines for how gas development should and should not occur in floodplains.

47. **Ban hydro-fracking in and around sole source, primary, and principal aquifers.** The Supplement states on p. 6-43: "...the high permeability of Primary and Principal Aquifers and shallow depth to the water table, makes these aquifers particularly susceptible to contamination." *CCE agrees that aquifers are unique and susceptible to contamination. CCE also believes that protecting water should be a primary guide in developing hydro-fracking regulations. Since the DEC acknowledges the susceptibility of aquifers to contamination hydro-fracking should not occur in or around aquifers. CCE believes that if we have to choose between energy and water, we should choose water.*
48. **Protect wildlife by prohibiting open liquid waste storage lagoons.** The Supplement discusses the likelihood of waterfowl interaction with Centralized Flowback Water Surface Impoundments on p. 6-48. *CCE recognizes that waterfowl often land in any open water, whether it is clean or polluted. CCE disagrees with the assertion that centralized impoundments will not pose a threat to waterfowl, and again asserts that flowback liquid must be kept in tanks to prevent it from harming waterfowl in addition to preventing spills and harming other waterbodies and public health.*
49. **Cumulative emissions and environmental impact must be assessed.** The Supplement discusses Emissions and Permitting on p. 6-51: *CCE does not believe that it is the job of the DEC to guide companies on how to avoid permitting for NOx emissions, furthermore, the DEC's belief that emissions will be lower is not in any way substantiated. Gas companies are imposing a large footprint from truck traffic, use of water, disturbance of land, and of course through emissions during the fracking process which all impact local environmental quality and should not receive a pass to emit, especially when the emissions are looked at cumulatively in an area. Simply because one gas well or one gas well pad may fall below large impact standards does not mean the cumulative effects have no impact. If the DEC intends to give a pass to gas companies for air emissions then there will be no way to aggregate the data of cumulative impacts to the environment and work towards lowering these emissions. This is not protective of the people or environment of New York and goes against New York State's stated goals of reducing emissions. CCE urges the DEC to aggregate emissions to ensure New York continues to reduce harmful air pollution that contributes to poor air quality, acid rain, smog, increased instances of asthma, and climate change.*
50. **Mandate emission records for Natural Gas Production Facilities.** The Supplement discusses: Natural Gas Production Facilities Permitting and Exemption on p. 6-52 and states: "the affected natural gas production facilities will still likely be required to

maintain records of the exemptions determination...” *Will the facilities be required to maintain the records or not? CCE believes that a facility should maintain records of emissions whether or not they require permitting in order to keep track of all sources of air emissions. CCE urges the DEC to mandate emissions recording from natural gas production facilities.*

51. **Natural gas compression standards.** The Supplement states on p. 6-55: “For gas gather compression, it is anticipated that most operators will select a large 4-stroke lean burn engine because of its fuel efficiency.” *CCE requests that DEC mandate minimum standards for fuel efficiency. Furthermore, CCE urges the DEC to require oxidation catalysts to reduce formaldehyde emissions.*
52. **Natural Gas liquid management.** The Supplement states on p. 6-56: “Initial analysis...indicates insufficient BTEX and other liquid hydrocarbon content to justify installation of collection and storage equipment for natural gas liquids.” *CCE respectfully requests the DEC to define “insufficient” and to know what is the fate of the “insufficient amount” of natural gas liquids? Does the DEC plan to prescribe a disposal method or allow direct discharge of natural gas liquids onto the ground?*
53. **Handling freshwater, flowback, and production brine.** The Supplement on p. 6-56 states: “Given that NYS Marcellus Shale is in the early stages of development, common practices for water handling have not been developed...” *While it is understandable that common practices have not been established, CCE is concerned that the DEC is not clear enough to ensure the most protective practices are adopted for managing liquid hydro-fracking waste byproducts. CCE urges the DEC to mandate the most protective practices should be adopted including use of storage tanks as opposed to impoundments for flowback.*
54. **Control methanol emissions by banning open lagoon storage for liquid waste.** The Supplement discusses Methanol emissions from Centralized Impoundment for Flowback on p. 6-57: *CCE agrees that methanol is a pollutant of concern and its potential concentration in flowback water again reinforces the fact that centralized impoundment areas must be prohibited in New York and flowback must be stored in tanks both on-site and off-site.*
55. **Emission controls and testing from uncontrolled venting.** The Supplement states on p. 6-60: “...no emissions of criteria pollutants resulting from uncontrolled venting of the gas are expected.” *CCE respectfully requests the DEC to detail the science behind this assumption. CCE urges the DEC to test uncontrolled venting of gas for criteria pollutants.*
56. **Impacts to Urban Communities.** The Supplement, on p. 6-65 states: “...the settings of potential wells are not expected to be in “urban” locations...” *While CCE agrees that wells should not be sited in urban locations, there appears to be no clear prohibitions from this occurring? If urban areas are not explicitly prohibited from hydro-fracking*

activities then it is incumbent upon the DEC to model impacts in urban locations.

- 57. Clarification of Use of Air Data for Modeling.** The Chapter 6 discussion of air modeling makes several assumptions based upon the DEC's use of data for air modeling. *CCE seeks clarity on the following from page 6-66.*
- a. Why has the DEC chosen to use two years of air data instead of five?*
 - b. How does the reduction of sampling years used improve the analysis reported?*
 - c. What was the rationale behind choosing the sites used for air modeling?*
 - d. What sites were excluded?*
 - e. Why is upper air data not useful in determining how far air pollutants travel?*
- 58. Clarify source of industry data.** The Supplement states on p. 6-69: "...the data provided by industry were deemed more complete and could be substantiated for use in the modeling." *CCE respectfully requests the DEC disclose the raw data submitted by the industry and any reports submitted by the industry.*
- 59. Clarify rationale choosing off-site compressor instead of smaller onsite compressor.** The Supplement on p. 6-70 states: "...the modeling has included the off-site compressor in lieu of the smaller onsite compressor at the wellhead and an onsite line heater instead of an offsite one in order to determine expected worse case operations impact." CCE finds this analysis to be vague and respectfully requests the DEC articulate responses to the following questions. *Why does an off-site compressor represent the worst case impact? What difference do the alternate scenarios make? Do the off-site compressor and the onsite line heater represent options that should not be used in New York?*
- 60. Clarify approach to emissions calculations.** The Supplement on p. 6-72 discusses the calculations of the emissions rates. *CCE is concerned that the way the DEC presents the data, it appears that if the emission rates exceeded thresholds then the data was recalculated so they would not exceed thresholds. If this were the case, why would the DEC recalculate the emission rates to err on the side of the industry?*
- 61. Include venting and flaring of gas in cumulative analysis.** The Supplement on p. 6-73 states: "Annual impacts were not modeled, due to the very limited time frame for gas venting, even if ten wells are to be drilled at a pad." *CCE urges the DEC to assess and model impacts from venting and flaring, especially in light of their contribution to air pollution and contribution to regional cumulative impacts.*
- 62. Use more robust modeling for air quality.** The Supplement states on p. 6-73: "This simplification significantly reduced the number of model runs which would otherwise be necessary, without any real consequence to the identification of the maximum short-term impacts." *CCE respectfully requests the DEC to how it came to the conclusion that simplification of model runs does not limit the identification of the maximum short-term impacts. CCE request further clarification that proves that this modeling scenario captures accurate air emission data to inform protective air regulations applicable to the industry and emission control standards.*

63. **Consistently model all pollutants.** The Supplement discusses using dominant pollutants to reduce the number of model runs on p. 6-74. *CCE is concerned that the multitude of chemicals used and released during the hydro-fracking process are not adequately modeled in the Supplement. CCE respectfully requests the DEC to detail the impacts of all of these pollutants being present at the same time. CCE further requests all pollutants to be considered in modeling to properly assess the cumulative impacts of these pollutants on the site and the surrounding area?*
64. **Ban lagoon storage of flowback liquid.** Chapter 6 discussion in the Supplement on the air pollution from flowback liquid centralized surface impoundments that includes the DEC reviewing and modeling the air pollution from centralized impoundment. *As previously stated CCE urges the DEC to ban storage lagoons or centralized surface impoundments from use in New York. The potential for air and water pollution make centralized impoundments an unacceptable risk.*
65. **Stack height determination and cumulative analysis.** The Supplement, on p. 6-84 discusses stack heights to meet formaldehyde Annual Guideline Concentrations. *CCE respectfully requests the DEC to clearly articulate:*
- a. *How stack heights will be determined.*
 - b. *If a raised stack height is required; and*
 - c. *Will stack heights be modeled on a per well basis with cumulative impact assessments?*
66. **Modeling diesel emissions should be based on actual fuel used.** The Supplement, on p. 6-84 discusses the use of ultra low sulfur diesel. *CCE believes that if the DEC is basing its modeling on Ultra Low Sulfur Diesel then ULSD must be required for use. If the DEC does not intend to require ULSD for hydro-fracking associated activities then the modeling should be based on standard diesel fuel.*
67. **Mitigation measures must be subject to regulatory approval and public review.** The Supplement states on p. 6-85: "...a simple adjustment in stack height did not resolve these exceedances and it was determined that specific mitigation measures will need to be identified by industry." *CCE opposes mitigation measures solely identified and adopted by the industry and believes there is a clear regulatory role for determining effective and acceptable mitigation measures. Additionally, CCE requests that mitigation measures be available for public review and comment.*
68. **Fencing distance determination process.** The Supplement states on p. 6-86: "Without further modifications to the industry stack heights, a fence out to 500m would be required, but this distance could be reduced to 150m with the taller stacks and a redefinition of the background levels." *CCE requests that fencing specifications, especially in cases where it is less than 500m out, is subject to public review and comment. CCE seeks clarity on the following questions:*
- a. *Will this be determined on a site specific basis?*

- b. *Additionally, if a fence out to 500m is needed how will this affect land leasing and neighbors?*
69. **Ban Centralized flowback liquid surface impoundments.** Section 6.7 of the Supplement, on p. 6-129 outlines the potential problems from centralized flowback water surface impoundments. *This discussion outlines the problems that make open storage lagoons of hydro-fracking liquid waste byproducts unacceptable in New York and why steel tanks should be the only option considered.*
70. **Ensure proper treatment and disposal of radioactive waste.** The Supplement discusses disposal and treatment of NORMs on p. 6-13. *As discussed earlier, CCE finds the disposal of NORMs in underground injection wells while natural gas waste is exempt from underground injection regulations to be unacceptable. CCE urges New York to have a robust regulation of this radioactive waste. Without proper regulation, CCE is concerned that New York State taxpayers will eventually be saddled with the burden of cleaning up these sites, as the industry is exempt from critical federal environmental protection laws, including CERCLA. Additionally, CCE respectfully requests the DEC to provide clarity as to what offsite treatment facilities can properly treat radioactive waste. The lack of environmental safeguards and clearly identified treatment facilities to address the flowback water and production brine from hydro-fracking Marcellus Shale pose serious risks to the health and protection of New York's people and environment.*
71. **Require consistent visual assessments.** The Supplement, on p. 6-132 states: "The Department's Visual EAF Addendum is available to conduct a comprehensive review of visual impacts when one is needed." *CCE believes visual assessments should consistently occur and seeks additional clarity from the DEC on the following questions:*
- a. *How is it determined when a Visual EAF is needed?; and*
 - b. *Does the addition of a Visual EAF Addendum trigger a public review of siting to give local communities the ability to weigh in and comment on their community impact?*
72. **Assure Environmental Justice.** The Supplement addresses Environmental Justice on p. 6-140 and states: "The SGEIS/SEQRA process provides opportunity for public input and resulting permitting procedures will apply statewide and provide equal protection to all communities and persons in New York." *It is commendable that the DEC addresses Environmental Justice in the dSGEIS, as opposed to the 1992 GEIS where it was not addressed. CCE believes additional work is needed to achieve the aforementioned goals of environmental justice in this process.*
- a. **Accessibility:** the 800+ page supplement was virtually inaccessible for much of the public due to its oppressive size and language geared toward technical experts. Furthermore, the DEC failed to provide paper copies available at repositories early on in the process and many rural New Yorkers cannot download and print 800 pages. DEC held only 4 public hearings in the Southern part of the state, neglecting key locations including Buffalo, Rochester, and Syracuse. Each public

hearing was strongly attended by interested members of the public. While CCE appreciates the DEC's 'public availability sessions' we do not believe they replace general presentations to provide an overview of the document that the public is seeking while attending the public hearings.

- b. **Equal Community protection:** The Supplement is not protective of all communities and persons in New York. Larger water supplies are more protected than private water wells, giving preference to urban communities as opposed to rural New Yorkers. And finally, the Supplement appears to preferentially protecting downstate New York drinking water sources. There are extensive discussions on protecting the Filtration Avoidance Determination for New York City, but none for protecting the Filtration Avoidance Determination for the City of Syracuse- giving preference to New York City's watershed over that of the Syracuse.
73. **Consistent assumption of wells per pad.** The Supplement on p. 6-142 discusses the assumptions of number of wells per pad. CCE is concerned with the inconsistency in assumption of the numbers of wells to be drilled per pad. For example, the Supplement assumes *assume 10 wells per pad but then in discussing the impacts from trucks, the lower number of 8 wells per pad is assumed. CCE believes that if assumptions are to be made, they should be consistent throughout the document.*
 74. **Address site-specific cumulative impacts on air and water quality.** The Supplement on p. 6-142-6-143 discusses the site specific cumulative impacts, but fails to *address air or water quality, aside from the discussion on trucking. CCE recognizes the impacts on increased noise and visual changes, however CCE urges the DEC to provide a meaningful analysis of the cumulative impacts on water and air quality from hydro-fracking and associated activities.*
 75. **Include a meaningful assessment of the effects of a multi-well pad.** The site specific cumulative impact section concludes on p. 6-143 with "A single multi-well pad on a 640-acre spacing unit will drain the same area that could contain up to 16 single well pads." It is understandable that the overall impacts of 16 wells versus a single well pad would be similar there is no meaningful assessment of the site specific impacts of a MULTI-WELL PAD. *CCE respectfully requests that the DEC revisit how it has assessed a multi-well pad with the understanding that the regional impacts MAY be the same for a multi-well pad as opposed to a single well pad in regards to overall surface disturbance, the impacts on a single area from a multi-well pad WILL be different and must be adequately addressed.*
 76. **Assess Regional Cumulative Impacts.** The Supplement discusses Regional Cumulative Impacts on p. 6-143: CCE believes that *if the DEC is unable to reasonably estimate and assume the regional cumulative impacts from drilling then it must require a phased approach that allows it to accurately predict the impacts from high volume hydro-fracking. Additionally, CCE urges the DEC to account for current oil and gas operations in the state in any regional impact analysis.*

77. **Quantify number of well pad applications annually reviewed with current staffing levels.** The Supplement states on p. 6-144: “reduction in sites should allow for more resources to be devoted to proper siting and design of the pad and to mitigating the short-term impacts that occur during the drilling and stimulation phase.” *CCE is concerned with the historically low DEC resources, especially in the divisions of water, lands and forests, and mineral and natural resources. CCE specifically requests the DEC to quantify, based on current DEC resources, how many well pads could conceivably be developed in one year? Regional office staffing levels are also a concern. CCE requests the DEC to identify where will the sites likely be?*
78. **Assess Cumulative Impacts Wells drilled annually in NY.** The Supplement states on p. 6-144: Section 6.13.2.1: *“In response to questioning, a representative for one company estimated a peak activity for all of industry at 2,000 wells per year +/- 25% in the New York Marcellus play”? Why can the DEC not model regional impacts based upon this assumption? Additionally, the Supplement reports that “Other companies did not provide an estimate.” The DEC should press other companies for an estimate for make an estimate based upon the extent of the shale play in New York. What would be the impacts? Can New York handle this many more wells with our current infrastructure? What are the impacts to water, air, etc? The DEC has not made the case that it cannot reasonably model regional impacts.*
79. **Individual environmental review for play development.** The Supplement states on p. 6-145 “Many of these problems and solutions are unique to the play.” CCE believes that *if the plays are so unique then development plans must be made for each individual play, compared to the other plays in production and assessments for development for the state made from there. CCE has significant concerns with the issuance of a generic document for “low permeability shales” in which the problems and solutions for production is limited to a discussion on Marcellus Shale.*
80. **Establish rate of development through regulatory oversight.** The Supplement states on p. 6-145: “The rate of development cannot be predicted with any certainty based on factors cited above and in the Final Scoping Document. Nor is it possible to define the threshold at which development results in adverse noise, visual, and community character impacts.” CCE finds that *if the DEC cannot predict with certainty the rate of development then the DEC must establish the rate of development. Additionally, CCE believes it can be defined at what level the development will negatively impact air and water resources if they are modeled accurately, which is not done in this document. CCE urges the DEC to redo its assessment of regional impacts and reissue the dSGEIS.*
81. **Development rate should be based on environmental criteria.** The Supplement states on p. 6-146: “As a result, there is no supportable basis on which to set a limit on the rate of development of the Marcellus and other low-permeability gas reservoirs.” CCE believes the DEC *can establish a rate of development based on available (or lack thereof) treatment and disposal options, impacts to air, impacts to water and by allowing communities to define what will and will not negatively impact their*

community.

82. **Control on Rate of Development.** The Supplement states on p. 6-146 that “Accordingly, any limitation on development, aside from the mitigation measures discussed in the next chapter, is more appropriately considered in the context of policy making, primarily at the local level, outside of the SGEIS.” *CCE does not believe that limitations on development are solely at the discretion of the policymakers, local or otherwise. Secondly, it is misleading for the DEC to make the assertion that local officials can regulate rate of development when on page 1-2 of the Supplement the DEC makes the following statement:* “ECL § 23-0303(2) provides the DEC’s Oil and Gas Solution Mining Law supercedes all local laws relating to the regulation of oil and gas development except for local government jurisdiction over local roads and the right to collect real property taxes. Likewise, ECL §23-1901(2) provides for supercedure of all other laws enacted by local governments or agencies concerning the imposition of a fee on activities regulated by Article 23.” *It is not unreasonable to assume from the DEC’s assertion in Chapter 1 that local municipalities have their hands tied when it comes to the onslaught of the oil and gas industry and beholden to the DEC to represent their interests and to be protective of their wishes in concerns to planning and development. CCE seeks clarity on the exact protocols for rate of development, whose jurisdiction it lies in, and why.*
83. **Regulate seismic mitigation.** The Supplement states on p. 6-147: “Induced seismic events can be reduced by engineering design and by avoiding existing fault zones.” *CCE believes that if the DEC knows how to mitigate seismic events, the DEC should be incorporate seismic mitigation into regulations instead of merely observing opportunities for mitigation.*

CCE comments regarding Chapters 7 & 8 of the Supplement

84. **Regulate Water withdrawal to ensure best use of waters of the state.** The Supplement on p. 7-4 discusses Water withdrawals. CCE is concerned with the lack of consistent regulation on water withdrawals throughout the state. *CCE agrees that water withdrawals should not alter fresh surface waterbody’s designated best use. CCE also agrees that interim measures must be used until the Technical and Operational Guidance Series (TOGS) for water quality flow have been established. When the flow standard TOGS are released will they be subject to public review and comment? How will they be incorporated into the DEC’s natural gas permitting program?*
85. **Protecting free flowing waters.** The Supplement on p. 7-5 states: “The applicant is required to identify the source of water, projected withdrawal amounts and detailed information on rainfall and streamflow.” *CCE respectfully requests the DEC clarify the following questions:*
- a. How will source water be assessed cumulatively?*
 - b. What if an applicant’s proposed water supply cannot be used?*
 - c. What mitigation measures will be employed during dry years and dry months?*

d. How can the public review and comment on proposed water supply?

- 86. Protect New York's vital wetlands.** The Supplement on p. 7-6 discusses waivers for developing within 100 feet of the wetland based on economic or social need. *CCE is incredibly concerned about the DEC allowing New York's vital wetlands to be further degraded. As the DEC understands, wetlands are nature's kidney's and provide essential ecological services that buffer pollutants, reduce flooding, and provide essential habitat for fish and wildlife. CCE seeks clarity on the following questions from the DEC:*
- a. *What is the criterion by which development within 100 feet of a wetland is decided?*
 - b. *How is "economic need" assessed?*
 - c. *Is the degradation of the wetland and receiving waterbodies included in the analysis?*
- 87. Enforcing the Great Lakes-St. Lawrence River Water Resources Compact (Compact).** The Supplement discusses the Compact on p. 7-6: *While New York State has yet to enact implementing legislation and regulations related to the Compact, this multi-state compact is law and must be adhered to. Specifically, hydro-fracking activities must be compliant with the ban on inter-basin transfers and requirements of return of source water return. The requirements of the Compact must be incorporated into the dSGEIS, and then the dSGEIS must be revised when the Compact's implementing legislation and subsequent regulations are finalized.*
- 88. Prevent polluted run-off.** The Supplement states on p. 7-23, in regards to Stormwater prevention plans: "Many adverse impacts may be avoided by planning a development to fit site characteristics..." *CCE believes that adverse impacts must be avoided. CCE urges the DEC to mandate that hydro-fracking companies use best practices and develop in a manner that is environmentally protective. Furthermore, CCE strongly believes that the DEC should have active enforcement personnel to ensure compliance with stormwater water prevention and management plans.*
- 89. Consider stormwater prevention and control plans on a watershed basis.** The Supplement discusses stormwater prevention plans and natural gas construction sites on p. 7-23-24. *CCE agrees that stormwater prevention plans must be developed and submitted. CCE respectfully requests that the stormwater plans be subject to individual review on a per well basis. Additionally, CCE believes that stormwater controls should be looked at on a watershed basis to ensure that natural gas drilling is not adversely impacting the waters of the state.*
- 90. Protecting drinking water from diesel fuel spills.** The Supplement discusses diesel tank position in relation to water sources on p. 7-27-28. *CCE finds 500 feet away from a water source unacceptable. CCE urges the DEC to adopt a 2,000 foot buffer from a water source, especially drinking water supplies must be incorporated.*

91. **Groundwater baseline testing and long term monitoring.** The Supplement on p. 7-36: discusses groundwater impacts. *CCE respectfully requests the DEC to articulate:*
- a. *What is baseline testing of private wells?*
 - b. *What long-term monitoring is going to be in place to ensure that gas drilling does not impact private wells?*
92. **On site state regulators must be mandated for casing to verify wellbore was drilled in a manner protective of human health and the environment.** The Supplement discusses wellbore construction and protection of groundwater on p. 7-37. CCE is concerned that the Supplement states that there is simply an “opportunity for state regulators to witness casing and cementing operations.” *CCE strongly believes the DEC mandate that State regulators must witness and verify that the drilling has been done in a manner protective of human health and the environment. CCE respectfully requests clarification on what the Department means by adequate surface casing, adequate cement in the annular space; and adequate cement on production and intermediate casing*
93. **Increased Range of Private Well Testing and Better Disclosure of Results.** The Supplement states on p. 7-38 that “Supplementary permit conditions for high-volume hydraulic fracturing will require sampling and testing of residential water wells within 1,000 feet of the well pad, subject to property owners permission, or within 2,000 feet of the well pad if no wells are available for sampling within 1,000 feet either because there are none of record or because the property owners denies permission. All testing and analysis must be by an ELAP-certified laboratory, and the results of each test must be provided to the property owner and the county health department prior to commencing drilling operations.” *CCE agrees that well testing should be disclosed to property owners and county health departments, however those results should also be stored electronically with the permit on the DEC’s website. In addition, the range out for testing must be increased in two ways- first, it should be from the edge of the setback, as opposed to the well pad edge; and the testing should occur within 2,000 feet, not 1,000 feet.*
94. **Mandate long-term water well monitoring.** The Supplement discusses long term monitoring on p. 7-39. *CCE disagrees that well water quality testing should cease after one year. CCE recommends that the DEC require that during the life of a producing well, water quality should be tested and testing should continue annually for the first five years after plugged.*
95. **Regulations and clear guidance is necessary to protect air and water quality, cumulatively and on-site.** Chapter 7 of the Supplement discusses mitigating air, water, and cumulative and other impacts, however the DEC fails to make any clear guidelines or rule recommendations. Instead, the DEC simply says what could be done to reduce emissions. *CCE urges the DEC to establish clear guidelines with best available technology, and regularly update those guidelines to reflect best available technology, ensuring those are incorporated for all oil and gas drilling activities in New York State. CCE recommends the DEC creates definitive guidelines for mitigating impacts from oil*

and gas drilling and include those draft guidelines in the re-draft of the dSGEIS for public review and comment.

96. Ensure consistency with local planning documents. The Supplement discusses Consistency with local planning documents p. 8-4. New York's municipalities have put forth significant effort to develop comprehensive plans and other documents to guide sustainable development and assure long term quality of life for local residents. *CCE respectfully requests for the DEC to articulate how the DEC will ensure consistency with local planning documents with hydro-fracking operations. CCE also requests DEC to articulate the options local municipalities have if oil and gas drilling is inconsistent with their local planning documents.*

In closing, hydro-fracking has been linked to a variety of well and drinking water problems across the country. Furthermore, the oil and gas industry has successfully secured a laundry list of exemptions from major federal environmental and public statute.¹ One month following the issuance of the dSGEIS, Congress requested that the EPA undertake a large-scale study of the impacts to drinking water from hydro-fracking.² Congress, including many of the New York Delegation, is actively working to repeal the oil and gas industry's exemption to the Safe Drinking Water Act.³

The health of our shared waters is of utmost importance to CCE. Increased scientific understanding of the impacts of hydro-fracking on our nation's drinking water sources can more meaningfully inform regulatory safeguards to protect public health, private and public property, and our water. *CCE respectfully requests New York State to issue a moratorium on hydro-fracking to allow time for the completion of the Congressional requested United States Environmental Protection Agency (EPA) study of the impacts to drinking water from hydro-fracking.*

Thank you for your thoughtful consideration of our comments.

Dereth Glance
Executive Program Director

Sarah Eckel
Policy Analyst

Cc: Adrienne Esposito, Executive Director
Governor David A Paterson
EPA Administrator Lisa Jackson
EPA Region 2 Director Judith Enck

¹ Please see attached summary of federal oil and gas exemptions.

² Congressman Maurice Hinchey (NY-22) press release available at: http://www.house.gov/list/press/ny22_hinchey/morenews/102909Fracturingstudy.html

³ S. 1215, FRAC Act, full text is available: <http://thomas.loc.gov/cgi-bin/query/z?c111:s1215>.

SUMMARY OF OIL AND GAS INDUSTRY EXEMPTIONS FROM FEDERAL ENVIRONMENTAL STATUTES:

I. EXEMPTIONS SECURED THROUGH THE ENERGY POLICY ACT OF 2005

1. Safe Drinking Water Act (SDWA)

Hydraulic fracturing operations are completely exempted from regulation under SDWA and Underground Injection Control of fracking fluid was defined to exempt it from EPA regulation of Underground Injection Control.

2. Clean Water Act (CWA)

Expanded the definition of oil and gas operations and activities to include the construction of the drill site, waste management pits, access roads, in-field treatment plants and transportation infrastructure. Eliminated “sediment” as a pollutant in managing stormwater run-off from drill pad site and all oil and gas field construction activities and operations.

3. National Environmental Policy Act (NEPA). Weakened environmental review process by presuming that some oil and gas related activities should be analyzed and processed by the Interior and Agricultural Departments under categorical exclusions, which does not provide for a public comment period.

II. ADDITIONAL OIL AND GAS ENVIRONMENTAL REGULATORY EXEMPTIONS

1. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) or Superfund. The list of covered hazardous substances section 101(14) excludes crude oil and petroleum.

2. Resource Conservation and Recovery Act (RCRA) The Solid Waste Disposal Act of 1980 exempts oil field waste from Subchapter III of RCRA until the EPA could prove the wastes were a danger to human health and the environment. In 1988 EPA made a regulatory determination that oil field waste should be exempted because of adequate state and federal regulations. This includes produced waters, drilling fluids, and associated wastes.

3. Clean Air Act (CAA) The CAA states that the oil and gas industry will not be aggregated together to determine if they are subject to Maximum Achievable Control Technology for each source. The exemption also extends to pipeline compressors and pump stations in some instances.

4. Toxic Release Inventory under the Emergency Planning and Community Right-to-Know Act (EPCRA) The oil and gas industry is exempted from reporting under section 313 of EPCRA, even though it generally meets the requirements established for reporting.