

CRITICAL ISSUES TO THE OIL AND GAS INDUSTRY IN NEW YORK STATE

**Submitted by the Independent Oil and Gas Association of New York
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The Independent Oil and Gas Association of New York (“IOGA”) submits this analysis of critical issues that have been identified by IOGA in response to the New York State Department of Environmental Conservation’s (“DEC”) revised draft Supplemental Generic Environmental Impact Statement (“rdSGEIS”), proposed regulations for high-volume hydraulic fracturing and proposed stormwater general permit (collectively, “Regulatory Proposals”).

Executive Summary

- The DEC’s Regulatory Proposals, and in certain instances, proposed mitigation measures, are based upon unrealistic, worst-case scenarios that impose costly and time-consuming requirements that do not meaningfully advance the collective goal of advancing safe and responsible development in the State of New York. Substantial improvements are needed to ensure an effective regulatory program that achieves the dual objectives that we all share, safeguarding the environment and promoting the development of the State’s clean burning indigenous natural gas resources.
- Without change, these proposals will render shale gas in New York non-competitive.
- They will, in addition, place small businesses at a disadvantage.
- The concept of Best Management Practices (“BMP”) is misused resulting in mitigation that is too prescriptive and without sufficient flexibility to accommodate future technological innovations.
- Together, the preceding factors run the substantial risk of making the exploration and development of unconventional natural gas in New York uneconomic.
- Consistent with the foregoing, it does not appear that any consideration has been given to the timely processing of permit applications in New York State in order to lessen regulatory burdens, reduce staffing needs and promote natural gas development. The many sequential agency and intra-departmental reviews and coordination with river basin authorities that are contemplated by the process are too cumbersome and will not work in practice.
- Without a scientific basis or rationale, there are significant setbacks and prohibitions proposed that will make it extremely difficult to lay out spacing units and locate well pads. Industry evaluation of actual acreage controlled by several operators reveals that this will have the effect of reducing the available acreage by as much as 50%. Compounding this result is the fact that industry will be forced to use smaller units, which will have the unintended consequence of increasing surface disturbance by requiring a greater number of well pads. The opposite should be encouraged through the implementation of reasonable setbacks, consistent with existing regulatory setbacks that have worked well in practice and with thousands of wells that have been drilled in New York State to date. In addition, all setbacks and prohibitions should be subject to a

waiver process where good cause is shown why the setbacks and prohibitions will strand acreage and resources without any real environmental benefits. Lastly, any prohibitions and setbacks that are contemplated to be revisited in several years should expire automatically unless extended by formal order of the Commissioner.

- The water quality regulations are predicated upon the false pretense that an individual State Pollution Discharge Elimination System (“SPDES”) permit is required for hydraulic fracturing, but then the regulations establish an exemption for the stimulation technique itself. This is nonsensical and conflicts with existing law since hydraulic fracturing does not involve a discharge to the waters of New York State. In addition, the regulations contain many definitions and requirements that duplicate the definitions and requirements contained in the proposed, as well as existing, comprehensive minerals regulations. Often, there are subtle differences between the regulatory definitions, which will lead to utter confusion. Compounding these problems is the fact that the water quality regulations contemplate sequential review of water quality issues after a drilling permit has been issued. This will lead to duplicate review of many issues, which is the hallmark of regulatory inefficiency, as well as unnecessary delay.
- The water quality review should be limited to the implementation of a multisector general permit applicable to stormwater discharges from the construction of well pads and other disturbed areas implemented in accordance with existing requirements. Although such a permit is contemplated, the proposed new permit is unnecessarily complicated and requires detailed chemical and radiological analysis of stormwater discharges, which is not required for any other industry in New York State. In effect, the proposed stormwater permit abandons the concept of “benchmark testing” by proposing detailed and costly testing requirements that exceed the testing requirements for most SPDES permits in effect today, including those permits that regulate sophisticated chemical operations. Stormwater discharges from well pads can be safely, reliably and cost-effectively monitored through the existing benchmark standards that include total suspended solids, pH and chlorides. Any discharge from a well at a well pad is likely to include chlorides, which is why chlorides are a common and appropriate benchmark standard for the natural gas sector.
- The regulations propose to eliminate the limit on the bonding required for each well as well as multiple wells where a single operator operates multiple wells. Since shale gas wells are likely to be operated for decades, this will lead to unnecessary bonding costs and will unnecessarily tie up capital. Reasonable limits for individual wells and cumulative limits for well operators should be maintained in the regulations. Bonding is only necessary where a well operator defaults on its plugging and abandonment responsibilities, which has not occurred under the modern-day oil and gas program in New York State.
- Based upon worst-case scenarios, many of which will never occur, the DEC proposes unrealistic air mitigation measures, many of which are unavailable or impracticable as well as preempted by the Clean Air Act. They also cannot be justified or sustained by reliance on the State Environmental Quality Review Act (“SEQRA”). In addition, the DEC fails to take into account the significant changes that are being proposed by the United States Environmental Protection Agency (“EPA”) to regulate air emissions from drilling and stimulation activities.

- In disregard for the statutory mandate that the DEC balance competing uses of water in New York State, the proposed SEQRA mitigation measures and regulatory proposals seek to implement the Natural Flow Regime (“NFR”) as a minimum flow requirement on all water withdrawals exclusively for the natural gas industry, including water withdrawals subject to federal interstate compact commission approval by the Susquehanna River Basin Commission (“SRBC”) or the Delaware River Basin Commission (“DRBC”). The NFR does not balance competing interests and is unnecessarily conservative in its approach. In addition, the use of the NFR method, specifically in the Susquehanna River Basin, often results in a more stringent flow requirement than would be required utilizing the methodologies practiced by the SRBC. This is in direct conflict with the New York State 2011 water withdrawal legislation (Laws of 2011, ch. 401) which provides an express exemption for water withdrawals approved under the purview of the federal interstate compact commissions.
- Rather than leave local road issues to agreements between operators and municipalities, the DEC is proposing that all operators submit a road transportation plan, which, among other things, must be reviewed by the New York State Department of Transportation (“NYDOT”). This will cause unnecessary delay and lead to additional staffing needs that are unnecessary and interject the State into what is primarily a local issue subject to express local jurisdiction.
- The proposed mitigation measures and regulatory proposals require each operator to perform a “green” frac analysis for each well permit application even though the industry has made great strides in greening frac fluid additives. This will lead to significant cost and delay, and there are no standards identified for review of the analysis. Since the operator and the service company are responsible for determining efficacy to maximize the recovery of the natural resource, the agency should abandon this requirement or adopt a more generic alternative.

Worst Case Scenarios

Much of the rdSGEIS and the regulatory proposals that are based upon the rdSGEIS rely too heavily on worst-case scenarios as purported justification. This is improper in the context of SEQRA and has led to a number of Regulatory Proposals that are unnecessarily conservative, all of which have the impact of driving up the cost of compliance without any corresponding benefit to the environment or public safety. This has the impact of making shale gas development in New York economically non-competitive with other neighboring states, which drive out the few remaining players and stifle the return of industry to New York State.

In spite of credible information and reasonably foreseeable industry projections provided by IOGA, the DEC has opted to analyze worst-case scenarios as if they are expected-case scenarios for many impact topics. For example, in the case of number of horizontal wells drilled per year, IOGA provided the DEC with reasonable projections of the average number of horizontal and vertical wells anticipated by industry to be drilled in New York over the next 30 years. Along with these average projections, IOGA included an estimate of peak year drilling rate (maximum) reflecting typical patterns of field development (i.e., a gradual ramping up of exploration, development and production to a peak drilling rate followed by a long period during which drilling rates would decline to approach zero). Instead, in its estimate of cumulative water withdrawal impacts, the DEC has used the peak rate as if it were the norm. Furthermore, the DEC has assumed that all wells included in the peak rate are horizontal wells. Thus, the DEC has chosen to “double-down” on the worst-case scenario by intentionally disregarding IOGA’s

estimate for horizontal and vertical well drilling rates and simply assumes that the sum total should be applied as if all wells were horizontal. Because horizontal wells use considerably more make-up water for hydraulic fracturing than do vertical wells, this results in an overestimate of cumulative withdrawals.

Additional examples can be found in the DEC's air emissions dispersion modeling analysis which used unnecessarily conservative input data and assumptions resulting in very restrictive and mandatory mitigation measures, most of which are not available to the industry. This was done in spite of credible information provided to the DEC by IOGA. The DEC opted to analyze worst-case scenarios as if they were the expected-case for all situations.

Again, such an approach is outside the definition of "reasonably foreseeable." As a result of these and other ultra-conservative assumptions, the industry is now confronted with required mitigation strategies based on unrealistic, worst-case assumptions. These are but a few examples of an over-arching, worst-case approach that DEC has employed throughout the rdSGEIS.

Permit Processing

It does not appear that any significant thought has been given to the amount of time that it will take to process a permit application in New York State following the completion of the SGEIS and associated regulatory processes. The rdSGEIS and the proposed regulations contemplate review by multiple state agencies and divisions within the DEC and, potentially, coordination with one or more federal interstate compact commissions, but there is no plan for how this will be accomplished in a timely manner. Compounding this problem is the fact that many of the reviews are contemplated as being sequential (e.g., the requirement to process the permit application for a minerals permit under Part 560 prior to seeking qualification for a stormwater general permit.).

Nowhere in the document is there a clear table and flowchart of what is required in a permit application to drill a well. More importantly, there are both internal and external points of approval for specific reports, plans and requirements. There are no timeframes associated with approvals to be obtained from both inside and outside the DEC. Therefore, a great deal of regulatory uncertainty in the process exists. Companies that invest in New York need to know the ground rules and a predictable and timely process to make their investment decisions. The rdSGEIS is deficient in setting forth an application framework and relative timeframe for approval. Without these basics, timing of investments, commitments to contractors, and even length and terms of property owners' leases cannot be reasonably assured.

One of the factors that made New York competitive in the past was the prompt turnaround for drilling permits. Prior to the implementation of the current regulatory proposals, it was typical to obtain a drilling permit in six weeks. There is no guarantee under the programs that are the subject matter of the current proposals that an operator will be able to get a permit in six months. Moreover, in many cases, it will take far longer given the requisite biological and other studies (e.g., aquifer testing) that are contemplated as a predicate to the permit application process. At a time when the New York State government needs to be "smart sized" and more efficient, it is inappropriate to propose multiple layers of review. As an alternative, the DEC should create a "user-friendly" permit application process that has all of the staff necessary in DEC's Minerals Division to process the permit application expeditiously.

A further example of the confusion that exists concerning how permit applications will be processed is the role contemplated for local governments. Notwithstanding a 30 year history of interpreting ECL § 23-0301(2) as preempting all efforts by municipalities to regulate or zone natural gas drilling and stimulation activities, the rdSGEIS seemingly reverses this history and contemplates a role for municipalities in the siting and permitting process. The rdSGEIS also proposes as a catch-all mitigation measure that the DEC will consult with local municipalities regarding the timing of development and will limit drilling permits to avoid potential impacts on community character, tourism and other socioeconomic impacts (e.g., visual, noise and road impacts) associated with concentrated development. rdSGEIS, § 7.11.3. This requirement is of grave concern.

It is unclear how the DEC will limit permits and how this will impact pending applications by various operators, including operators facing lease expirations. There also are no standards articulated for when limits should be imposed, how limits would be imposed or the length of time for any limits. This creates significant uncertainty for industry, jeopardizes lease holdings and makes New York anti-competitive. It also runs counter to the statutory mandates for shale wells to drill “all horizontal infill wells in the unit to be drilled from a common well pad within three years of the date the first well in the unit commences drilling” ECL § 23-0501(1)(b)(1)(vi). Further, involving local municipalities in the calculus, some of which may or may not favor drilling, flies in the face of the ECL’s express preemption over local regulation of the industry.

IOGA has submitted a written analysis demonstrating the reasons why municipalities are preempted from regulating any aspect of natural gas drilling, with the narrow exceptions of the regulation of roads and local taxation. There are now two court cases pending challenging municipal bans, one in the Town of Dryden and another in the Town of Middlefield. The DEC should follow its long-standing precedent and await the outcome of these court cases before suggesting any role for municipalities in the well permitting and siting process, beyond issues associated with roads and local taxation.

Setbacks and Prohibitions

Without a scientific basis or rationale, the DEC has proposed a series of prohibitions and setbacks at a scale never before contemplated, despite New York’s long-standing history of natural gas exploration and development. Some of these prohibitions and setbacks preclude any development while others preclude the siting of well pads within prohibited areas. When these prohibitions and setbacks are mapped against leasehold interests, it often becomes impossible to lay out units or site well pads in a manner that makes development in New York State economically viable. As a consequence, operators will lose hundreds of millions of dollars already invested in minerals leases and related geological assessments, landowners will lose millions of dollars in royalties, significant tax revenue will be lost, and very few operators, if any, will be willing to invest their drilling budgets in New York State. The result will be lost economic opportunity for New York totaling billions of dollars as well as a flagrant disregard of the State’s repeated policy objectives to further oil and gas development.

New York State’s ECL, as it pertains to oil and gas, has long since been recognized as a “conservation statute” that is designed to prevent waste, promote the recovery of the resource and protect the correlative rights of landowners. Consistent with that goal, ECL § 23-0301 declares that it is in the public interest to “regulate the development, production and utilization of natural resources of oil and gas in this state in such a manner as will *prevent waste; to authorize and provide for the operation and development of oil and gas properties in such a manner that a greater ultimate recovery of oil and gas may be had, and that the correlative rights of all owners*

and the rights of all persons including landowners and the general public may be fully protected [emphasis added].” Likewise, subdivision 5 of §3-101 of the New York Energy Law declares that it is part of the energy policy of New York State “to foster, encourage and promote the prudent development and wise use of all indigenous state energy resources including, but not limited to on-shore oil and natural gas...[and] natural gas from Devonian shale formations...” These guiding principles serve as the basis for the oil and gas regulatory framework in New York State.

In furtherance of these goals and objectives, New York State has created detailed statutory schemes for spacing and compulsory integration to promote the greater recovery of the resource and protect correlative rights. The spacing and permitting provisions are generally found in ECL Article 23, Title 5. In accordance with the fundamental policy, ECL § 23-0503(2) authorizes the issuance of permits to drill wells if a proposed spacing unit “conforms to statewide spacing and is of approximately uniform shape with other spacing units within the same field or pool, and abuts other spacing units in the same pool, unless sufficient distance remains between units for another unit be developed.” For the unconventional, continuous plays like the Marcellus and the Utica, this is likely to require relatively uniform rectangular-shaped abutting units in order to avoid gaps in the development of the resource.

Also paramount in the well permitting process is the need to site a well pad in a location that minimizes environmental impacts to the maximum extent practicable. This is frequently accomplished by looking for locations that avoid stream crossings, wetlands, steep slopes, endangered species, and known areas of historic significance, and by taking into account other siting considerations consistent with BMPs. The existing regulations found in 6 NYCRR § 553.2 contain appropriate setbacks that have worked well for decades and have not led to any demonstrable problem with the 14,000 operating wells in New York State.

Against this backdrop, the DEC is proposing a series of additional setbacks and prohibitions. These include the following:

- Prohibitions:
 - the prohibition of well pads in the New York City and Syracuse watersheds and a buffer zone that is 4,000 feet around those watersheds;
 - primary aquifers and a surrounding 500 feet buffer; and
 - certain State lands (State Forests, State Parks, etc.).
- Setbacks:
 - within 2,000 feet of a primary aquifer;
 - within 2,000 feet of public water supply wells and reservoirs; and
 - within 500 feet of private drinking water wells or domestic use springs, unless waived by the owner, and within 100-year floodplains.

The proposed rdSGEIS also declares that a supplemental environmental analysis (i.e., a site-specific Environmental Impact Statement [“EIS”]) will be required in certain instances. These instances cover three categories: location, drilling depth and type of water-related issues. The location carve-outs require a site-specific EIS:

- within 1,000 feet of New York City’s subsurface water supply infrastructure;

- within a principal aquifer and surrounding 500 feet buffer (this would also require an individual SPDES stormwater permit);
- within 150 feet of a perennial or intermittent stream that is not a tributary to a public drinking water supply, storm drain, lake or pond; and
- within 500 feet of a tributary to a public drinking water supply.

Furthermore, private lands with tracts of grassland greater than 30 acres or forest greater than 150 acres in Focus Areas may be off limits to surface occupancy and/or severely restricted insofar as their future development potential is concerned. The definitional structure is poorly crafted in that it makes reference to contiguous patches of these lands. If the lands are not contiguous, they should not require any further analysis. As proposed, these areas would require extensive studies prior to permitting, which requires at least one year of study before and two years of study after completion of the well. IOGA questions whether the DEC has the legislative authority to impose such restrictions on private lands.

Moreover, the setbacks proposed by the DEC are to the “edge of location” (i.e., the well pad), not to the well itself. Therefore, all estimates of acreage excluded from development must add an additional 200 feet from the restricted area/edge of surface disturbance to the centrally located well, which increases the setbacks significantly.

As an initial matter, the proposed prohibitions directly conflict with the policy objectives of the statutory scheme in that they fail to promote the recovery of the resource or protect the correlative rights of the landowners in the prohibition areas. For this reason alone, the prohibitions should be eliminated. A clear example of this is the prohibition on drilling on state land even though New York State has a long track record of leasing state land for surface activities associated with natural gas drilling. Given the size of many of the state forest tracts, this will leave large undeveloped areas, which will hurt neighboring landowners and the municipalities in which the state land tracts are located from the loss of tax revenue.

Regarding the setbacks, although some reasonable setbacks are not objectionable (e.g., the existing regulations), when multiple setbacks are established without the authority of the DEC to grant waivers for good cause shown, it becomes extremely difficult, if not impossible, for an operator to lay out units in an orderly fashion. Further complicating this issue is the trend in the industry to drill longer horizontal wells, thereby reducing the number of well pads that are required. This trend further reduces the surface footprint of the industry and corresponding impacts to the environment. Because New York law limits the size of spacing units for shale wells up to 640 acres, it will be the practice of most industry operators to lay out back-to-back units with a common well pad for both units thereby draining areas up to 1,280 acres (two square miles). As such, the location of the well pad becomes a critical factor in laying out spacing units based upon mineral lease rights and other environmental considerations.

By way of example, one operator has laid out spacing units based upon back-to-back 640 acre unit spacing, its mineral leases and traditional factors to avoid sensitive environmental areas. In the Owego area of Tioga County, this operator has sufficient mineral rights to develop twelve 640 acre spacing units with back-to-back spacing units and common well pads. Unfortunately, when land constraints are overlaid with the regulatory setbacks being proposed by the DEC, only two of the units are feasible. Because the spacing law allows spacing “up to” 640 acres, this operator may be able to develop other smaller units, but taking such an approach will increase the number of well pads significantly, thus increasing the cost to the operator (including, but not limited to, the significant cost to prepare a greater number of permit

applications and the regulatory fees associated with those applications) and increasing both the surface impacts and truck traffic. Even then, certain areas will be inaccessible, with the consequence that millions of dollars already invested in leases will not be practical to develop. Of equal importance is the fact that landowners and municipalities will lose the revenues associated with the development of this acreage.

Another operator has gone through a similar exercise in Chemung County, New York. The primary aquifer provision will eliminate significant developable acreage. This operator estimates that 50% to 60% of their current leasehold in Chemung County is located in primary aquifer areas. And, this prohibition is being proposed even though the same operator has developed four Trenton Black River wells through the very same primary aquifer without any environmental contamination. It is difficult to understand the rationale behind the prohibition for Marcellus-type wells while Trenton Black River wells are allowed to proceed. The primary aquifer prohibition and the many other setbacks proposed will require abandonment of attractive and logical drill sites and cause losses to the operator, mineral owners and municipalities amounting to hundreds of millions of dollars. This will also drive locations out of valleys and onto the more visible, timbered slopes, which is illogical from a resource protection standpoint.

Given the foregoing, industry predicts that the acreage available to develop the shale resources in New York is far less than the 80% being predicted by the DEC and may approach numbers as low as 40% to 50%, if not lower. This situation will:

1. leave large tracts without development of the resource in direct contrast to the ECL's statutory directives;
2. subject operators to lost investments and development potential;
3. preclude landowners from reaping billions of dollars of economic benefits from the development of shale resources in New York State;
4. deny significant tax revenue to local municipalities as well as the State;
5. encourage the development of smaller units resulting in greater surface disturbance; and
6. deter most, if not all, operators from giving any serious consideration to developing any unconventional plays in New York State (i.e., the Utica as well as the Marcellus).

The overall result will be a large amount of stranded acreage that will not be drilled, leaving natural gas in the ground along with landowners who will be economically impacted and who will not understand why their land will not be drilled when neighboring properties have reaped the benefits.

IOGA estimates that the lost economic opportunity due to prohibitions and setbacks in the Marcellus Shale in just four New York counties (Broome, Tioga, Chemung and Steuben) could exceed \$19 billion of royalty income and \$2 billion of lease bonus income that would remain unrealized by mineral rights owners. Furthermore, the State and its citizens will not benefit from potential tax revenues of as much as \$5.8 billion (\$4.4 billion in ad valorem taxes from production and \$1.4 billion in personal income taxes from royalty owners). Assuming that the shale plays extend beyond these four counties and also to other shale resources (e.g., the Utica Shale), then the unrealized income and taxes is likely to be considerably greater. Furthermore, these numbers do not take into account the lost income to the operators or the many local businesses that will service the oil and gas industry and pay taxes on their income.

As an alternative, the industry recommends that many of the setbacks be eliminated or reduced to the existing setbacks, or setbacks that are consistent with those in place in other neighboring states. Industry further recommends that broad waiver provisions be included in the regulations to allow setbacks to be waived by the DEC for good cause shown. Finally, for the prohibitions or setbacks that the DEC is proposing to revisit in a given period of time, it would be far better to have those provisions automatically sunset. That way, those areas would be restored for development after an appropriate phasing period without the need for the DEC to go through the rulemaking process to change the prohibitions. Certainly, the DEC will face considerable opposition and litigation if it initiates a rulemaking to remove certain prohibitions and setbacks, which will have the effect of making those prohibitions and setbacks becoming permanent or semi-permanent until the litigation is resolved. By including an automatic sunset provision, the DEC would still be able to extend those provisions by emergency rulemaking, if warranted, but would be in a far better position to open up more areas of the state for natural gas production consistent with the statutory mandate set forth in ECL § 23-0301. Alternatively, the DEC could make these prohibitions and setbacks sunset automatically unless extended by an order of the Commissioner. This would also give the DEC total control and flexibility concerning the longevity of these impacts without having to go through a formal rulemaking process to terminate the requirements.

Water Quality Regulations

In an effort to deal with criticism from environmental stakeholders about the need for environmental regulations, the DEC has proposed two sets of comprehensive regulations. The first proposal amends 6 NYCRR Parts 551-556 and adds a new Part 560 to incorporate many of the substantive requirements in the rdSGEIS into formal regulations. In addition, the DEC has also proposed extensive regulations in 6 NYCRR Parts 750.1 and 750.3 relative to high-volume hydraulic fracturing (“HVHF”) and regulatory requirements that apply to an individual permit under the State Pollution Discharge Elimination System (“SPDES”) program or a general stormwater permit.

As an initial matter, there is no need for separate regulations concerning HVHF in the water program given the proposed comprehensive regulations set forth in the new Part 560. This will lead to confusion and a duplication of resources both at the private and public sector levels. For example, the proposed water quality regulations set forth a number of new definitions in proposed § 750-350.2. A number of these definitions are the same as those contained in the proposed mineral regulations; however, there are sometimes subtle but important differences in how terms are defined. Moreover, there are times when the proposed regulations conflict with existing definitions in the existing regulations. Lastly, there are some definitions that are not used in the text of the regulatory proposal.

Similarly, there are a number of substantive requirements proposed in the water quality regulations that parallel or duplicate the requirements set forth in the proposed Part 560. A far better practice that would be less confusing and provide greater regulatory certainty would be to include all of the substantive requirements in one place. That one place should be in the mineral regulations. If a particular document needs to be certified to be consistent with the requirements of the water program, that requirement can be contained in the minerals regulations.

Similarly, the water regulations contain different prohibitions and setbacks. The regulated industry, the public, and even the regulators themselves would be better served if

there was a single set of prohibitions, setbacks and other requirements that relate to the extent to which surface activities or subsurface activities will be impaired in a single location, namely, the Part 560 regulations.

Another example where it appears that the Regulatory Proposals are at odds with what happens in practice is the confusion in the draft regulations and the rdSGEIS concerning how drilling and stimulation are phased in and out at a particular well pad over time. This confusion is highlighted in the proposed water quality regulations, which seem to contemplate a bright line distinction between various phases of the operation. In practice, drilling and stimulation do not occur at the same time, but different operators have different formulas for how many wells they drill prior to stimulation and how long it will be following drilling and stimulation before additional wells will be drilled at the same well pad. The regulations and the rdSGEIS need to make it perfectly clear that well pads will be processed through multiple phases on a repetitive basis and the Regulatory Proposals need to account for this fact as well.

Stormwater General Permit for High-Volume Hydraulic Fracturing

Uncontaminated stormwater discharges associated with oil and gas extraction activities are exempt from the federal National Pollutant Discharge Elimination System (“NPDES”) program and therefore from New York’s SPDES program, as well as under § 402(l)(2) of the Clean Water Act as clarified in § 323 of the Energy Policy Act of 2005. Despite this, the DEC has proposed a new stormwater general permit (“GP”) for HVHF in complete disregard of this exemption. To compound this, the DEC’s proposal unnecessarily creates requirements unique to the natural gas industry that are far too numerous, unnecessarily prescriptive and lacking the requisite flexibility.

- To acknowledge the exemption, the HVHF GP should reflect New York’s current SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities (GP-0-06- 002) by requiring the HVHF GP only for “stormwater discharges associated with industrial activity from oil and gas extraction ... which have had a discharge of a reportable quantity (RQ) of oil or a hazardous substance for which notification is required under [federal regulations].”
- Similarly, a statutory NPDES permit exemption applicable to stormwater discharges associated with construction activities remains in effect, even though a federal court overturned EPA regulations implementing it. The DEC should modify the HVHF GP to mirror Pennsylvania’s streamlined Erosion and Sediment Control General Permit (ESCGP-1). The Pennsylvania permit requires robust planning for environmental protection along with expedited permit review and authorization.

Bonding for All Wells

The DEC has proposed to amend § 551.7 of the existing regulations to eliminate the maximum bond required for plugging and abandonment of an individual well and a two million dollar cap on bonding for operators that operate multiple wells (i.e., blanket bonding). Although industry supports reasonable bonding requirements, it is unreasonable to eliminate bonding limits and not encourage blanket bonds or other funding mechanisms that will be more cost effective to industry. The DEC needs to keep in mind that shale gas wells are expected to be productive for decades. As such, requiring individual bonding for each well will tie up capital unnecessarily. Bonding is only necessary where an operator defaults on its plugging and abandonment obligations. In recent times, there have been no such defaults. Accordingly, the proposed amendment of § 551.7 goes too far. To the extent that the DEC moves forward with

increasing the bonding that is required, operators should be allowed to qualify for guarantees based upon established financial tests utilized in other regulatory programs. Once again, there should be no need to unnecessarily tie up capital in the bonding market for wells that will operate for decades.

Air Issues

With the proposed rdSGEIS, the DEC is seeking to establish statewide regulations and mitigation requirements that conflict with existing and/or proposed EPA air quality regulations pertaining to the same emission sources and are preempted by the Clean Air Act. As recently as August 23, 2011, the EPA proposed new standards specific to the oil and gas sector (sector).¹ The rule proposes regulations based upon proven technologies that would reduce air pollution from the sector while enabling responsible growth in U.S. oil and natural gas production. For the upstream sector, EPA's proposed rule includes wells that are hydraulically fractured (both new wells and workover operations), emissions from storage tanks, pneumatic device fugitive emissions, and some glycol dehydrators. In addition, over the last seven years the EPA has passed new regulations on every type of engine used in the oil and gas industry including diesel-fired, new and reconstructed, and non-road engines.

IOGA has previously submitted a written analysis demonstrating why many of the proposed mitigation requirements are preempted by the Clean Air Act. See also rdSGEIS Comments (Tab 2, Exh. B). Moreover, the DEC's attempt to use SEQRA to impose the proposed air mitigation measures is likewise preempted. Indeed, the New York State Court of Appeals has made it absolutely clear that SEQRA cannot be used to do an "end run" around federal standards in a federally-preempted field. See *Matter of Niagara Mohawk Power Corp.*, 82 N.Y.2d 191, 197-201 (1993); see also *Matter of Power Auth. of State of N.Y. v. Williams*, 60 N.Y.2d 315 (1983).

The DEC's approach in proposing air emissions controls was based upon a worst-case dispersion modeling scenario. While this may provide assurance that the air emissions are controlled in a worst-case scenario, those prescriptive controls should not be required at every location in the state, at every time of day or year, nor at every tank battery regardless of production. To do so would be unnecessary and would greatly over-control most sources.

The new federal engine rules, as well as EPA's proposed rules for oil and natural gas production activities, were or are being developed with extensive input from all affected sectors and are designed to protect the public's health and welfare while allowing reasonable energy development. The DEC has chosen to mandate separate and unique controls, some of which are technically infeasible, not cost-effective, and/or potentially unsafe for certain sources. EPA's rules have provided the State with all the air emission control options necessary to regulate the development of shale gas. The DEC should remove the prescriptive source-specific emissions controls specified in the proposed rdSGEIS and instead rely on the EPA's air emissions control requirements for those same sources both in the current version of the proposed rdSGEIS and when conducting their air emissions permit application reviews.

¹ EPA, 40 CFR Parts 60 and 63, EPA-HQ-OAR-2010-0505, Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews, <http://www.epa.gov/ttn/atw/oilgas/fr23au11.pdf> (accessed August 26, 2011).

Water Withdrawals and Natural Flow Regime Considerations

The proposed rdSCEIS states that a primary emphasis of the DEC is protection of water resources and that water withdrawals affecting surface or groundwater have been identified as a potential impact resulting from use by the natural gas industry for HVHF. While IOGA certainly agrees that protection of water resources is critical, the utilization of the NFR method to calculate passby flows, as proposed by DEC, is misguided, unduly stringent, and contradicts the passby methods employed by the SRBC and DRBC, both of which have regulatory authorities for water withdrawals in their specific jurisdictions. The SRBC and DRBC have been effectively regulating water withdrawals for decades in New York State and the DEC acts as the New York State representative on these commissions. The SRBC has the most experience with the natural gas industry and its methods have been demonstrated to be protective of existing aquatic communities, are designed to be conservative, and incorporate data collected specific to the location of the proposed withdrawal.

It is unreasonable that DEC would impose the NFR method for passby conditions solely for the natural gas industry, when all other withdrawals, such as those by electrical power generating facilities, public water supplies, golf courses and ski resorts, water bottling, manufacturing and industrial sources, would be regulated using the guidance implemented by the appropriate river basin commission. Withdrawals within the Susquehanna and Delaware River Basins should be regulated by the SRBC and DRBC, respectively, to avoid duplication and to ensure regulatory consistency and streamlined approvals. As a result of the water withdrawal legislation adopted into law in New York State this year (Laws of 2011, ch. 401), outside of the Susquehanna and Delaware basins, the DEC would have primacy regarding water withdrawals greater than 100,000 gallons per day. However, that legislation specifically exempts from the permitting requirements withdrawals that are approved by the DRBC or the SRBC. This is current legislative and gubernatorial recognition of the need for the DEC to defer to the federal interstate compact commissions regarding water withdrawals subject to their jurisdiction. The DEC, therefore, should defer to the SRBC passby flow guidance (e.g., SRBC Policy 2003-01), which is environmentally protective and applied uniformly amongst all water users. The DEC, with their membership position within the SRBC and the DRBC, should strive for uniform review standards between itself and the river basin commissions and not seek to override the basin commission standards with standards that are unnecessarily conservative and inconsistent with well-established New York law and policy.

Under the NFR methodology, all withdrawals, including those on large river systems, regardless of withdrawal quantity and rate, would require a passby. While many operators have developed storage capacity and all are utilizing recycled waters, uninterrupted withdrawals with predictable availability are important for year-round operations by the industry. Using the NFR methodology would greatly increase the number of days per year that a water source would be unavailable, when compared with the SRBC passby guidance. Since water withdrawal points would be unusable during much of the year under the NFR methodology, industry will be forced to construct a greater number of water withdrawal locations potentially increasing the overall habitat impact, and likely reducing the opportunities to share sources among operators.

Additionally, industry may need to purchase additional waters or augment their existing supplies from older and larger public water supplies in New York State. Many of these public water supply systems commanded very large water withdrawals in the past to support now defunct industries. Due to the age of those historic withdrawals, these sources may not have undergone the rigorous environmental review currently employed by the SRBC; instead these

withdrawals are grandfathered under the SRBC regulation. Purchasing water from public water supplies also will increase permitting and transportation costs to the industry.

The NFR methodology is overly complicated, will be difficult and costly to implement and appears to be administratively burdensome on both the industry and the regulatory agency. Metering and monitoring requirements themselves are projected to exceed an additional \$200,000 per withdrawal location, with no demonstrated environmental benefits over the passby flow guidance conditions implemented by SRBC under Policy 2003-01.

Moreover, the NFR methodology being proposed by the DEC does not take into account the statutory obligation to balance competing water resources as required by ECL § 15-0105 and the cases interpreting the balancing obligations of the DEC regarding water consumption and use. The unnecessarily conservative NFR methodology conflicts with this statutory obligation.

All of the concerns expressed by DEC in the proposed rdSGEIS regarding potential water withdrawal impacts, including reduced stream flow, impacts to aquatic habitats and ecosystems, impacts to wetlands, and aquifer depletion, are addressed by the river basin commissions through their extensive water withdrawal regulatory programs. In the proposed rdSGEIS, the DEC itself recognizes that the amount of water withdrawn specifically for HVHF is projected to be low compared to overall water use in New York State, increasing fresh water demand by only 0.24%. In light of this small increase in projected water use and the existing authorities operating in New York State, this proposed duplicative effort is unwarranted. The programs implemented by SRBC and DRBC are environmentally protective, robust, and should be utilized by DEC for regulating withdrawals by the natural gas industry. Outside of the jurisdictional areas of the SRBC and the DRBC, reasonable standards should be employed in accordance with the balancing requirements of the ECL that promote the development of the resource and protect the environment.

Transportation Plans

The rdSGEIS's proposed mitigation measures for road impacts raise significant concerns. ECL § 23-0303(2) gives primary jurisdiction over roads to local municipalities and, as such, the rdSGEIS states that the DEC will include as a supplemental permit condition that the issuance of a well permit does not relieve an operator from compliance with local regulation. See rdSGEIS, § 7.11.3. And, to this point, the rdSGEIS strongly encourages operators to enter into road use agreements with impacted local municipalities and requires operators to file copies of their road use agreements with the DEC. rdSGEIS, §§ 7.11.3, 8.1.1.4. Such a road use agreement should comprise all of the required mitigation.

Unfortunately, the rdSGEIS goes on to require submission of a transportation plan, which will be incorporated by reference into the drilling permit. rdSGEIS, §§ 7.11.1.1; 7.11.1.3. The required transportation plan must be prepared by a NYS-licensed professional engineer in consultation with the DEC. rdSGEIS, § 7.11.1.3. It must include, among other things, the number of anticipated truck trips, times of day when trucks will be operating, proposed haul routes, the locations of, and access to and from, parking/staging areas and the ability of the roads proposed in the haul route to accommodate the anticipated traffic. rdSGEIS, §§ 7.11.1.1; 7.11.1.3. All of this is duplicative and unnecessary where an operator has entered into a road use agreement. The submission of a road use agreement, therefore, should obviate any requirement for a transportation plan.

The transportation plan also must include a baseline survey of all roads, bridges and culverts according to the NYSDOT 2010 Network Level Pavement Condition Assessment Manual. rdSGEIS, § 7.11.1. Given the desire that the SGEIS will have a lengthy useful lifespan, it is inappropriate to articulate the manner in which an operator shall assess baseline road conditions which will change over time and vary in different road use agreements. The requirement also detracts from local jurisdiction over roads by taking away the right of operators and local municipalities to determine the appropriate manner in which to document baseline conditions.

Also problematic is the requirement that an operator submit a copy of its road use agreement and transportation plan to the NYSDOT and the expectation that the NYSDOT will have an advisory role with respect to both. rdSGEIS, § 7.11.1.3; 8.1.2.2. First, there is no need for the NYSDOT to review and comment on an operator's road use agreement with a municipality. That is an issue appropriately left to the signatories of the agreement. Second, the rdSGEIS is silent as to the scope and extent of the NYSDOT's role and the timing associated with its review. This creates permitting uncertainty for operators and, more than likely, unnecessary delay in permitting. It also creates unnecessary regulatory cost in a time when New York State needs to streamline government, not expand it.

“Green” Frac Fluid Analysis

During the time that the DEC has been evaluating environmental impacts associated with HVHF, considerable progress has been made with the industry “greening” the hydraulic fracturing process. Several years ago, it was not uncommon to see as many as 20 chemical additives being used in an effort to improve the efficacy of the stimulation technique. Today, many operators are using as few as 6 chemical additives and have reduced the volumes of additives without compromising efficacy. Notwithstanding the significant process, the rdSGEIS and the proposed regulations require as part of *each* permit application a review and certification by the operator that the operator is using hydraulic fracturing additives that are the least toxic alternatives available. Although this requirement attempts to qualify the analysis requiring efficacy, the language is confusing and is not always consistent among the rdSGEIS and the various places where this requirement appears in the draft regulations. Initially, it is important to stress that all decisions concerning the makeup of hydraulic fracturing fluid are based upon an engineering evaluation that alters the additive mix to maximize the efficacy of the hydraulic fracturing process within the target formation. Very often, adjustments are made in the field based upon data obtained during the hydraulic fracturing process. Given the great progress that has been made by the industry without compromising efficacy, there is no need to mandate this type of analysis.

Alternatively, if an analysis of “green” frac fluid additives is required, each service company proposing to conduct HVHF business in New York should be required to conduct an initial analysis, subject the requirement that the DEC can request an updated analysis if circumstances have changed. The analysis would focus on the relative toxicity and other environmental attributes of the various additives that are used, or could be used, by a service company in hydraulically fracturing Marcellus Shale wells or wells in other shale gas plays. The service company would include in the review any "green" products it offers that could be used in shale gas wells. The service company could subsequently update its master list when it anticipates using a new chemical, or every two years at a minimum.