

**TESTIMONY SUBMITTED TO THE SENATE STANDING COMMITTEE'S ROUNDTABLE
DISCUSSION CONCERNING NEW YORK STATE'S DRAFT SUPPLEMENTAL GENERIC
ENVIRONMENTAL IMPACT STATEMENT GOVERNING HORIZONTAL DRILLING AND
HIGH-VOLUME HYDRAULIC FRACTURING FOR NATURAL GAS PRODUCTION**

Submitted By

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Since it was established 20 years ago, the Finger Lakes Land Trust has worked cooperatively with landowners and local communities to conserve those lands that define the character of the Finger Lakes Region. To date, the organization and its partners have permanently protected 11,000 acres of open space within the Finger Lakes and New York's Southern Tier.

The Land Trust today owns and manages a network of 26 nature preserves and conservation areas that are open to the public. In addition, the organization holds 80 perpetual conservation easements on lands that remain in private ownership. These lands include undeveloped lakeshore, majestic forests, pristine wetlands, rugged gorges, and scenic farmland. The Land Trust is supported by 1,900 families from across the region and beyond.

The Land Trust is quite concerned about potential adverse impacts to the Finger Lakes and the scenic landscapes of this region that may arise from the development of natural gas resources associated with the Marcellus Shale formation.

While we are still reviewing the state's draft Supplemental Generic Environmental Impact Statement, our preliminary assessment leaves us with many concerns about the document's failure to ensure water quality within the Finger Lakes and other water bodies, as well as the statement's failure to address cumulative environmental impacts. In addition, the document's emphasis on a combination of self-reporting and suggested (as opposed to required) mitigation measures does not instill confidence that sensitive environmental resources will receive the protection they deserve.

In particular, our concerns are as follows:

Water Quality Protection

Each of the Finger Lakes serves as a public drinking water supply. Collectively they serve as the basis for the region's high quality of life and a tourism industry that generates \$2.6 billion per year. The Lakes should be afforded the same standard of protection provided for the New York City Watershed. Proposed Buffer zones and setbacks should be expanded, and a systematic effort should be made to assess wetlands not currently regulated by the state in order to provide for their protection. In addition, hydraulic fracturing should only be allowed after detailed plans are provided outlining the safe disposal of all chemical additives associated with the process.

Cumulative Environmental Impacts

The supplemental impact statement fails to address the cumulative environmental impact of expected drilling within the Marcellus Shale Formation. In our eyes, this is clearly a failure of the document. While modeling the impacts is challenging, it is not impossible. The development of 1,000 or more gas

wells and associated infrastructure will undoubtedly have a profound impact upon the region. In particular, the effects of forest fragmentation and the hydrological impacts upon streams and wetlands across the region are likely to be significant. These impacts can only be properly addressed by addressing them on a cumulative basis.

Significant Land Resources and Habitats

The impact statement highlights the special treatment of state regulated wetlands, state parks, and lands within the New York City Watershed. The document fails to recognize other significant lands within the region that are likely to be adversely affected by gas drilling. These include but are not limited to priority projects of the New York State Open Space Plan, sites of ecological significance identified by the New York Natural Heritage Program, Important Bird Areas recognized by Audubon New York, and permanently protected open space lands and conservation easements held by Land Trusts and other conservation organizations.

Forest Fragmentation

The statement fails to adequately address the impact of drilling and associated infrastructure on the region's forests – both in terms of plant communities and wildlife. Those birds that rely on interior forest will be affected by the combination of well sites, pipelines, access roads, and compressor stations. This infrastructure will fragment the region's forests, likely leading to increased mortality and population declines among species such as the scarlet tanager and ovenbird. In addition, the creation of these corridors will lead to increased invasion by non-native plants. While the state is to be applauded for specifying control measures for invasive plants, the Land Trust's own experience with efforts to control these plants across the region makes us skeptical that these controls will be effective in the long run.

Self Reporting and Suggested Mitigation Measures

As mentioned earlier, the supplemental impact statement seems to rely on self-reporting by the gas companies to a considerable degree. In addition, many mitigation measures are suggested and not required. We are afraid that this approach, with a lack of adequate oversight, will lead to unnecessary impacts upon the environment that could be avoided by stronger state oversight and clear mandatory mitigation standards.

Creation of a Regional Mitigation Fund

While it is critical that the state require the highest performance standards for drilling, and also call for site specific mitigation, the fragmentation of forests and the disruption of local hydrological conditions across the region calls for mitigation on a regional scale. The attached proposal calls for the creation of a state administered fund that would be used to mitigate the cumulative impact of natural gas development on forest fragmentation and the degradation of streams and wetlands. The fund would be used to purchase land and conservation easements on high quality habitats, with a particular emphasis on creating networks of protected open space as identified in the New York State Open Space Plan.

The Finger Lakes Land Trust recognizes the need for New York State to diversify its energy resources. At the same time, we also recognize the greater value of the State's pristine land and water resources. Any effort to extract greater natural gas resources should only occur with the most stringent environmental safeguards as well as appropriate mitigation of unavoidable impacts. The draft Supplemental Generic Environmental Impact Statement fails to meet both of these standards.

These are our preliminary concerns about the draft document. Given its breadth, our review process continues, and we will forward any additional comments to the committee's attention.

A PROPOSAL FOR THE ESTABLISHMENT OF A REGIONAL MITIGATION FUND TO OFFSET ENVIRONMENTAL IMPACTS ASSOCIATED WITH THE UTILIZATION OF NATURAL GAS ASSOCIATED WITH THE MARCELLUS SHALE FORMATION

The Issue

With the potential for more than 1,000 natural gas wells and associated infrastructure, utilization of natural gas deposits associated with the Marcellus Shale will have unavoidable impacts upon the natural resources of New York State's Southern Tier.

In particular, high quality forest will be degraded through habitat fragmentation caused by the installation of well pads and compressor sites, as well as associated gas pipelines and access roads. Stream and wetland resources will also be altered by hydrological changes associated with pipeline and road construction.

Forest resources will be impacted in three ways:

- The installation of infrastructure to facilitate natural gas extraction will fragment forest habitat, reduce forest patch size, and increase edge habitat – to the detriment of species that rely on interior forest habitat. Of particular concern are migratory songbirds such as the ovenbird, wood thrush, and scarlet tanager.
- A secondary impact associated with the fragmentation of forest habitat will be the increased invasion by non-native, invasive plant species. Pipeline corridors and access roads will provide a migration corridor that will facilitate the spread of invasive plants to pristine areas.
- The expected proliferation of roads, lanes, and pipeline corridors will also lead to the increased incidence of trespass by all terrain vehicles (ATV's). Already a problem in some areas, chronic ATV trespass can lead to disturbance of resident wildlife species and degradation of habitats.

Construction of infrastructure associated with Marcellus gas extraction will also impact numerous stream and wetland areas throughout the region. The installation of gas pipeline networks and access roads will alter hydrological conditions – in some cases, drying out some small streams and wetlands and, in other cases, increasing peak flows.

Proposed Mitigation Fund

While drilling for natural gas within the Marcellus formation should only proceed with the utmost oversight by regulatory authorities and with utilization of best practices to minimize environmental impacts, the cumulative impacts highlighted above may be minimized but not avoided if drilling is to proceed. To mitigate these impacts, it is proposed that New York State create a regional mitigation fund to finance the protection of significant forest, wetland, and streamside habitat within the areas to be affected by Marcellus drilling.

The fund would be used to finance the outright purchase of environmentally sensitive lands, as well as the purchase of conservation easements. Eligible projects could be sponsored by state conservation agencies, local governments, or qualified non-profit conservation organizations. Disbursement of funds would be determined by a board appointed by the governor, including representatives of the New York State Department of Environmental Conservation, the U.S. Fish and Wildlife Service, and at least five additional appointees representing conservation organizations, sportsmen's organizations, and regional planning agencies or similar institutions.

Projects would be evaluated for their conservation value as well as the adequacy of a stewardship plan for long-term management of the lands or easements to be acquired. The fund would be established through initial payments made by gas producers at the commencement of drilling activities and supplementary payments would be made based on ongoing production.

A similar model has already been established in the Jonah gas fields of eastern Wyoming. There, 500 gas wells have had a significant impact on 30,000 acres of rangeland and adversely affected local wildlife populations. In 2006, gas producers in this area set up a \$24.5 million fund to mitigate associated impacts. Some of these funds have subsequently been used to purchase conservation easements on ranchland that was identified for its rich plant and wildlife communities.

By establishing a regional fund for the Marcellus, the State of New York would create the ability to mitigate diffuse impacts associated with gas development while at the same time providing additional resources that would benefit priority open space projects such as the Emerald Necklace and the Chemung River Greenbelt.