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Intro to Marcellus Shale

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On September 7, 2011, the New York State Department of Environmental Conservation (DEC) released its latest draft of the Supplemental Generic Environmental Impact Statement (SGEIS) regarding New York's rich natural gas field known as Marcellus Shale. A copy of the revised draft SGEIS can be found here. The purpose of the revised draft SGEIS is to provide comprehensive review and recommendations on mitigating the environmental impact caused by high-volume hydraulic fracturing, commonly known as hydrofracking.

Hydrofracking utilizes large amounts of water which have raised concerns about the adverse impacts related to water supplies, wastewater treatment, and disposal and truck traffic. Hydrofracking also requires chemical additives which may pose hazards when highly concentrated.

These concerns were reviewed in the revised draft, including the potential impacts of:

- water withdrawals
- transportation of water to the site
- use of additives in the water to enhance hydraulic fracturing
- space and facilities required at the well site to ensure proper handling of water and additives
- removal of spent fracturing fluid from the well site and its disposal
- potential impacts at well sites where multiple wells will be drilled during a three-year period.

Noise, visual and air quality considerations are also addressed, along with the potential community character and socioeconomic impacts. The revised draft describes the well-permitting process and inter- and intra- agency coordination relative to the permitting process. Some of the key provisions of the revised draft include:

- prohibiting high-volume fracturing in New York City and Syracuse watersheds;
- prohibiting drilling within all primary aquifers and within 500 feet of their boundaries;
- surface drilling would be prohibited on state-owned land including parks, forest areas, and wildlife management areas;
- drilling permitted privately held lands under rigorous and effective controls;
- no permits will be issued for sites within 500 feet of a private water well or domestic use spring;
- no permits will be issued for a proposed site within 2,000 feet of a public drinking water supply well or reservoir at least until three years of experience elsewhere have been evaluated;
- no permits issued for well pads sited within a 100-year floodplain; and
- all products utilized in the high-volume fracturing process must be fully disclosed and applicants must agree to publicly disclose the names of the additives, subject to appropriate protections for proprietary

information.

Public comment on this highly contentious extraction technique is open until December 12, 2011.

Marcellus Shale is a fine-grained rock formation containing valuable natural gas that extends deep underground from Ohio and West Virginia northeast into Pennsylvania and southern New York. While geologists have long known of the existence of the natural gas resources found in the Marcellus Shale formation, the depth and tightness of the shale made gas exploration and extraction difficult and expensive. However, recent technological enhancements in horizontal drilling and hydraulic fracturing have enabled natural gas companies to drill as deep as 7,000 feet to retrieve the natural gas. Additionally, the high demand for natural gas in New York, New Jersey and New England and the construction of the Millennium Pipeline through the Southern Tier have caused interest in natural gas extraction to increase at a feverish pace.

While geologists had initially estimated that the Marcellus Shale formation may contain up to 410 trillion cubic feet of recoverable natural gas, recent estimates have lowered that number to 84 trillion cubic feet in a report released by the United States Geological Survey on August 23, 2011. A copy of the August 23, 2011 report can be found here. While the recent estimates reduce the initial estimate by nearly 80 percent, Marcellus Shale is still a fertile source of clean-burning natural gas, especially for New York State which uses approximately 1.1 trillion cubic feet of natural gas a year.

In addition to providing a clean-burning energy source for New York State, hydrofracking could potentially create up to 37,000 jobs and generate $31 million to $185 million a year in added state income taxes for New York. These numbers are projected based upon a scenario that envisions a high level of development of the natural gas reserves, according to analyses in a report prepared by Ecology and Environment, Inc. The Economic Assessment report, which was completed in August 2011, was prepared for and contracted by the DEC. A copy of the Economic Assessment report can be found here. The Economic Assessment report became part of the broader draft of the SGEIS. While the Economic Assessment report indicates there are large uncertainties with the future of natural gas markets and production, it identified the region bordering Pennsylvania and Broome, Chemung and Tioga Counties as the epicenter of the expected hydrofracking activity over the next 30 years.

This review process will ultimately lead to an establishment of a set of rules and regulations which aims to balance protecting the environment, watersheds, and drinking water and promoting economic development. The DEC's review and recommendations process are leading to what appears to be the development of an extensive and rigorous set of regulations governing hydrofracking in New York. In addition to the ongoing public comments period, the DEC has scheduled four public hearings across the state – November 16th in Dansville; November 17th in Binghamton; November 29th in Sullivan County; and November 30th in New York City.