Marcellus Shale

What Does Development Mean for Wyoming County Landowners?

By Debra Welch, Agriculture Community Educator, and Joan Petzen, Ag Program Leader, CCE of Wyoming County; Source: NYS Dept. of Conservation; Gas Well Drilling in the Marcellus Shale

In order to provide Wyoming County landowners with information and feedback regarding negotiations with drilling companies, leases and drilling Marcellus shale on their own properties, a Workshop has been scheduled for Thursday, June 17, 2010, at the Wyoming County Fire Training Center, at 3651 Wethersfield Road, Warsaw beginning at 9:00 AM. The workshop features a variety of related subjects and an experienced panel and speakers, as follows:

- **'Issues Landowners Should Address When Leasing Oil and Gas Rights'** - David Colligan, Attorney
- **'Marcellus Gas Play'**- Art Buckley, Wyoming County Planning and Development
- **'Mitigating Ag Impacts of Oil and Gas Drilling'** - Mike Saviola, NYS Department of Ag and Markets

- **'Using Coalitions to Leverage Negotiating Power'** - Lindsay Wickham, Field Advisor and Local Issues Specialist with Farm Bureau; and Asher Terwilliger, President of Chemung County Farm Bureau and Volunteer with Chemung County Natural Gas Coalition

There is no fee for this workshop, which will be from 9:00 AM to 1:00 PM, with light refreshments served. This is sponsored by Cornell Cooperative Extension of Wyoming County, Wyoming County Farm Bureau, Wyoming County Planning and Development, the Wyoming County Agriculture & Farmland Protection Board, and the Wyoming County Soil and Water Conservation District. Landowner participation is encouraged. Those interested in attending are asked to please register by emailing Art Buckley, Wyoming County Planning and Development at abuckley4@rochester.rr.com or call 585-237-4110.

Landowners have been approached by energy and land management companies about leasing their land. Although leasing is not regulated by the Department of Environmental Conservation, information about leasing gas well rights is available on the DEC website: **http://www.dec.ny.gov/energy/205.html** Questions have been raised about possible environmental and community impacts. Most concerns are related to water use and management and composition of the fluids used for fracturing the shale. Other good sources of information

about gas development for landowners ar offered by Cornell University Cooperative Extenison: **http://cce.cornell.edu/Community/NaturalGasDev/Pages/default.aspx** and New York State Farm Bureau members can access their fact sheet at: **http://www.nyfb.org/resources/topic_main.cfm?StartRow=1&ID=1&catID=9**. Most public libraries offer internet access or if you need to access these resources and do not have internet access, contact Wyoming County Development and Planning or Cornell Cooperative Extension of Wyoming County.

The Marcellus Shale is a black shale formation extending deep underground from Ohio and West Virginia northeast into Pennsylvania and southern New York. Although the Marcellus Shale is exposed at the ground surface in some locations in the northern Finger Lakes area, it is as deep as 7,000 feet or more below the ground surface. Drilling activity is expected to focus on areas where the Marcellus shale is deeper than 2,000 feet. Across New York's Southern Tier and Catskill Foothills, there is talk about a modern-day gold rush for natural gas. Drillers are hurrying to lease rights from New Yorkers to tap into the Marcellus Shale formation, a rich natural gas reserve. While this exploration could increase supplies of natural gas, expand the tax base and boost the upstate economy, it can also have significant environmental impacts.

Geologists estimate that the entire Marcellus Shale formation contains between 168 trillion to 516 trillion cubic feet of natural gas throughout its entire extent. It is not yet known how much gas will be commercially recoverable from the Marcellus in New York. To put this into context, New York State uses about 1.1 trillion cubic feet of natural gas a year. Although geologists have long known about the natural gas resources of the Marcellus Shale formation, the depth and tightness of the shale made gas exploration and extraction very difficult and expensive. Interest has increased significantly of late due to recent enhancements to gas well development technology, (specifically horizontal drilling and hydraulic fracturing); the proximity of high natural gas demand markets in New York, New Jersey and New England; and the construction of the Millennium Pipeline through the Southern Tier.

Horizontal drilling and hydraulic fracturing are legal and common in New York, and the majority of wells in the Marcellus Shale will be hydraulically fractured. A "horizontal well" is first drilled down vertically to a depth above the target gas-bearing rock formation. Special tools are then used to curve the well so that the hole is drilled horizontally within the gas-bearing rock for up to several thousand feet. Except for special tools used underground, horizontal drilling is performed using the same equipment and technology as vertical drilling, with the same protocols in place for aquifer protection, fluid containment and waste handling. Multiple horizontal wells can be drilled laterally from the same surface location, so that less of the ground surface is disturbed compared to using vertical wells to produce the same amount of gas. Hydraulic fracturing consists of pumping a fluid and a propping material such as sand down the well under high pressure to create fractures in the gas-bearing rock. The propping material (usually referred to as a "proppant") holds the fractures open, allowing more gas to flow into the well than would naturally. No blast or explosion is created by the hydraulic fracturing process, which has been used in New York since at least the 1950s. Hydraulic fracturing technology is especially helpful for "tight" rocks like shale. Hydraulic fracturing of the Marcellus Shale will require large volumes of water to fracture the rocks and produce the desired amount of gas. Each well may use more than one million gallons of water.

Plan to attend Wyoming County's Landowner Information Seminar on June 17 to learn more about leasing, the Marcellus Gas production process and strategies that can be employed to mitigate adverse impacts to agriculture and forest production. ❖