

Impact of Gas Drilling on Small Landowners

The gas and how it is recovered

The Marcellus Shale is a geological formation that was created some 400 million years ago, when a vast sea existed in what is now the Upper Delaware Valley. The sea stretched through New York, Pennsylvania, Ohio and West Virginia. The bed of this sea is now buried thousands of feet under the surface of the earth, and much of it is rich with natural gas.

In order to get the gas out of the ground, drilling companies drill straight down for thousands of feet, then gradually turn the bit sideways until they are drilling horizontal to the surface of the earth. Once the drill has reached its targeted length, which can be up to a mile in length, hydraulic fracturing (or fracking) fluid is forced down the well bore under high pressure.

This fractures the deep shale that holds the gas, and the chemicals in the fracking fluid help the gas escape from the shale. The gas travels up the well bore and ultimately is routed into a pipeline and shipped to market. It is a complex process that can be very profitable for the drilling companies, and sometimes for large landowners. But it also presents a number of dangers and disruptions for local residents.

The guaranteed impacts

There is a gas rush currently underway in various states, including New York and Pennsylvania. If gas drilling companies are able to exploit the natural gas resources the way they have in other states, there are many impacts that will unfold in the area.

In the spot where a well is drilled, there will be constant noise 24/7. There will be bright lights shining at night, all night. There will be dust and toxic chemicals spewed up into the air. There will be a surge in truck traffic, with trucks running constantly to support the operation. The drilling operation will be heard and felt up to a half mile away.

This activity will last for 30 to 60 days, while the drilling continues. But that's only for one well. With well spacing planned for up to 16 wells on one well pad on a 640 acre unit, the disruption will be continuous over several years. And the noise and disruption won't stop there.

As mentioned above, the wells will be "hydraulically fractured," but this won't happen only once, it will be required every couple of years or more. This means the many trucks involved in the process will return to the well often over the possible 30 to 50 year life of the well. And it will be noisy again.

And the wells are just one aspect of the natural gas business that will disrupt the lives of local residents. Most often, the gas does not come out of the ground in a pure state, which means that it must be processed. That is done in compression stations that are generally located near gas wells.

These compression stations run 24/7, generate a great deal of noise, and very often emit many types of toxic pollutants into the air. Recently, in the town of DISH, Texas, these compression stations resulted in a local atmosphere that contained toxic gases many times higher than acceptable federal limits. In response to the high amount of toxic pollutants in the air, state officials are about to begin to take blood samples from all residents to measure the amount of toxic substances, such as benzene, in the resident's bodies.

Another concern for local residents is that many small pipelines will need to be given the right of way and constructed to get the gas from the wells to the Millennium Pipeline, which runs the length of Sullivan County. The laying of the pipelines will contribute to the dust, noise, truck traffic and impacts on the local environment. All of the pipelines can be put in place using powers of eminent domain.

The possible impacts

Along with the impacts listed above, there are other possible impacts that have occurred in other locations where this type of drilling has taken place. One of the most talked about impacts relates to the use of fracking fluids. Up to 3 million gallons of fracking fluids are used for each well. This fluid contains water, sand and a combination of more than 250 different chemicals, many of them highly toxic to humans and animals.

The toxicity of these chemicals is well known. In April 2009, 19 cows in Louisiana died from drinking liquid near a gas well; the local sheriff determined the liquid was fracking fluid. In July 2008, a nurse in Durango, Colorado was thrown into massive organ failure after being exposed to a fracking fluid chemical.

If the fracking fluid stayed deep underground it might pose less of a threat to humans, but it doesn't all stay deep underground. After a well is fracked with millions of gallons of fluid, 20- 70 percent of the fluid washes back up out of the wells, and must be stored until it can be treated and disposed of. Either way there is a very serious threat to drinking water.

Very often, the fracking fluid is stored in open pits, which are vulnerable to overflowing during heavy rains or flooding. Flooding is likely to occur in this part of the country.

Medical experts are also concerned that people who live near such open pits, and who are exposed to evaporation of the toxic fluid, could suffer negative impacts from breathing the polluted air that rises out of the pits and leaks from pipelines and the compressors and is spread by the wind.

Another possible negative result from drilling is the contamination of water wells. The act of drilling can cause changes to underground geology including the layers of earth that contain the water table. This is what reportedly happened in Dimock, Pennsylvania (40 miles west of Callicoon) in early 2009, when a drilling operation moved into the area.

The wells of at least fifteen residents were contaminated by migrating underground methane. The impact was so severe that the water can no longer be used by people or animals. The gas company is now trucking in bottled water to some of the residents. The residents are suing the drilling companies because they believe their wells will never recover from the contamination, and their homes have lost almost all of their value.

Impacts to human health stir the most concern among those who have experienced drilling, but there are many other impacts that are also of concern. When an area becomes home to a large number of drilling operations, many people from outside the area move in. As reported from other communities, this often leads to an increase in crime, and adds to the pressures on local law enforcement agencies.

Another concern is traffic. The influx of heavy trucks and other vehicles that comes with gas drilling takes a heavy toll on local roads, and local municipalities may be forced to raise taxes to pay for the wear and tear on the roads.

Additionally, as with any large industrial activity, there will certainly be instances when things just do not go the way they were supposed to. Several unintended spills of fuel and other materials have occurred in Dimock, and accidents are also certain to happen here.

Accidents can take the form of fires, explosions, spills or other kinds of mishaps. These mishaps need to be responded to by local emergency personnel. With limited emergency responders in the area, it is quite possible that gas drilling activity will be a burden to local emergency operations, spreading local EMS resources thin.

A lack of oversight

If any other large industrial business wanted to come into Sullivan County, NY and set up shop, that business would have to go before the town planning board to ensure that the business complied with the town zoning ordinances. This is not the case with gas drilling because State lawmakers decided that all decisions regarding drilling would be made in Albany and not at the local level.

At the federal level, almost all businesses are required to follow the country's prominent environmental laws, including the Clean Drinking Water Act and the Clean Air Act. That's true for every industry except the oil and gas drilling industry. In 2005, in a bill pushed through Congress by Vice President Dick Cheney, gas drilling and specifically fracking, were exempted from those and other important national environmental laws.

Who will benefit?

There is little doubt that there is a demand for natural gas. But will everyone in a community benefit from the gas extraction? Certainly the drilling companies will benefit, and the industry will make billions of dollars from the gas in the Marcellus Shale.

Some large landowners may make a lot of money but the nature of the community will change as a result. In White County, Arkansas, which sits atop another deep shale formation, many farmers made enough money from gas drilling leases so they decided to stop farming. And some large landholders took the money and moved away from the area.

But, while a few residents make a profit, the majority of the residents of the community don't have enough land to make any money from. Also these small plots of land with a house or small business often lose value when gas drilling enters the community.

While the gas drilling industry likes to paint drilling as a modern day gold-rush that will benefit everyone in the region, the truth is that has not been the case in areas where drilling has been going on for the past five or more years. In almost every community where gas drilling has occurred, residents organized to fight the drilling companies because of the negative impacts to their communities. Many people will suffer to benefit a few.

What can you do?

Interest in gas drilling is stronger than ever. Groups on New York, such as the Sullivan and Delaware Property Owners Association and the Rural Bethel Landowners Association are actively engaged in negotiating leasing conditions with drilling companies.

But along with the growing interest in drilling, there is also a growing awareness that this kind of deep horizontal drilling combined with fracking poses serious dangers to the environment, and human health and well being. To help ensure that gas drilling is stopped, or slowed down until regulations are in place that will ensure residents are protected from the harmful effects of gas drilling, you can get information and give support through groups that are fighting that battle particularly:

Catskill Mountainkeeper
4054 State Route 52
Youngsville, NY 12791
(845) 482-5400
www.catskillmountainkeeper.org
info@catskillmountainkeeper.org

Damascus Citizens for Sustainability
P.O. Box 147
Milanville, PA 18443
www.damascuscitizens.org
DCS@mailhosts.net

The majority of the people don't want gas drilling in this area. Our elected officials won't know that we think our communities are more important than a few people and the gas companies getting rich unless we tell them. Call or write all of your representatives. Talk to your neighbors and your friends. Put a NO DRILLING sign on your car or front lawn. This is the time for everybody to take responsibility for their own future.

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(For some officials, it is necessary to visit the web site before sending an email.)

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