High Volume Hydraulic Fracturing

What is Fracking?

Hydraulic fracturing, or "**fracking,"** is a means of extracting natural gas from deep shale formations. Once a shale well is drilled, millions of gallons of water, sand and proprietary chemicals are injected under high pressure into the well. The pressure fractures the shale and props open fissures that enable natural gas to flow more freely to the surface.

Horizontal hydrofracking is a means of tapping shale deposits containing natural gas that were previously inaccessible by conventional drilling. The method differs from conventional gas extraction in that, after drilling vertically down to the shale layer, the drill bore is turned and tunneled horizontally through the shale. Millions of gallons of water, sand, and chemicals are then injected to fracture the shale layer.

Reasons to be Hopeful:

•New Jersey, Maryland, Quebec and France have banned or put a moratorium on this new drilling process.
•A statewide moratorium has been introduced in the Ohio legislature.
•Citizens are speaking up to pass resolutions against brine spraying and for a statewide moratorium.
•If passed, the FRAC Act introduced in Congress will put oil & gas drilling under the Clean Water Act again.

What the Gas Industry Doesn't Want You to Know:

• Gas drilling is a boom-bust industry. Profits are short lived, with little money staying in the community. Large landowners who have benefited are likely to leave town. While some reap financial benefits, the entire community must pay for the damages and try to clean up a degraded environment.
•The gas industry often claims that fracking has been done for over 60 year. However, this new technique of high volume horizontal fracturing for natural gas has only been in use since the late 1990s. In 2005, it was exempted by Congress from the Clean Air Act, Clean Water Act, RCRA, Safe Drinking Water Act and other regulatory protections.

•Natural gas is not a bridge fuel; it is a non-renewable fossil fuel whose life cycle greenhouse gas emissions are higher than coal's. Its increasing production forces governmental focus away from a comprehensive energy policy and diverts investment funds away from renewable energy. It does not promote conservation.
•Gas drilling is not about American energy independence; foreign companies are currently obtaining local leases, and domestically produced gas is sold on the international market to the highest bidder.
•Exemptions, deregulations, government cutbacks, and lack of accountability have undermined the ability of state and national agencies, like Ohio EPA, to provide adequate protection against environmental, economic and social abuses of natural gas development.

Inadequate state and federal oversight has put the responsibility on local governments and home-town municipal attorneys to deal with multinational gas corporations and their armies of well-heeled attorneys.

For more information:

• visit **www.nofrackohio.com**
•Contact **Buckeye Forest Council:**
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phone: (614) 487-9290
• Contact NEOGAP
www.neogap.org
•Google-search: **"ignite tap water"** and see what happens when hydraulic fracturing is permitted in your community.

•Watch documentary films: "Gasland" or "What You Need to Know About Natural Gas Production" by Theo Colborn, Ph.D.

10 Reasons Why YOU Need to Be Concerned

1. Fracking Chemicals and Waste

Gas companies say that frack fluid is 99% water, but the 2% that is chemicals amounts to 205,000 to 905,000 lbs. per well. According to experts, 93% of known drilling and fracking chemicals have adverse health effects: 52% are neurotoxins, 37% are endocrine disruptors, and over 25% cause cancer and mutations.. These chemicals have begun showing up in western Pennsylvania rivers and drinking water in recent months. The industry says "dilution is the solution," but that only spreads these chemicals to more people in more communities. Benzene is toxic at 5 ppb, equivalent to a few drops in a swimming pool.

2. Radioactive waste

Marcellus and Utica shale contains high levels of radioactivity. Recent research at University of Buffalo documents the increased solubility of this material due to the fracking process. NY and PA authorities have reported levels of radioactivity in fracking wastewater at hundreds of times safe drinking water standards.

3. Accidental Spills, Deliberate Dumping

Any contamination of ground water and aquifers is a threat to public health, agriculture, and wildlife. After a recent spill of fracking wastewater in PA, the USDA quarantined cattle that drank contaminated water in an effort to protect the public from consuming potentially harmful products. Humans are not directly protected because fracking waste is exempted from EPA's Clean Water, Safe Drinking Water, and hazardous waste regulations. Many cases of illegal dumping into creeks and rivers and onto roads have been documented in West Virginia and PA.

4. Health Effects to Your Body

BTEX—benzene, toluene, ethylbenzene, and xylenes—are just a few of the highly toxic chemicals in frack waste. When ingested or inhaled, these volatile organic compounds stick to fat and accumulate. Short-term exposure can cause confusion, rapid pulse, anemia, damage to the nervous system, or death. Long-term exposure can cause Acute Myeloid Leukemia, Secondary Aplastic Anemia and damage to the reproductive system.

5. Air Quality

Volatile organics are vented into the air to "purify" the gas. In Utica shale areas, where oil is sought, the gas itself may be flared- burned off--directly into the air. Ground level ozone and off-gassed chemicals have serious health consequences for people, animals, and plants. For humans, this includes asthma, stroke, cardiovascular disease and irritable bowel disorders. In addition, experts say that when methane (the principal component of natural gas) is transported, 3-5% of it escapes from pipelines and compressors. Methane is a more potent greenhouse gas than carbon dioxide.

6. Effects on Water Sources

Drillers routinely draw water from local creeks and ponds. A recent preliminary study from the Academy of Natural Sciences showed levels of aquatic life 25% lower in areas of high volume drilling compared to watersheds with low or no drilling. Fish kills and foliage reduction have been widely reported in Pennsylvania.

7. Economics

Gas production is slated for much of OH's farming regions. Yet agricultural production, tourism, and recreation contribute more income to the state economy than the proposed income from gas drilling.

8. Declining Property Values

Most banks and insurance companies consider gas-leased properties to be an unacceptable risk. Many loan companies have policies that deny mortgages on properties that have been leased. Insurance companies are balking at writing policies for leased parcels, as landowners can be liable for accidents related to natural gas drilling. How does this affect you? Property values decline not only for those who have signed leases, but for everyone in the surrounding area. Reports from Wise County, Texas document property with wells losing 75% of its value.

9. Burden on Local Police and EMS

Local news stations have documented multiple emergencies at PA well sites, including explosions, fires, contamination and deaths of drill operators. Local responders, lacking knowledge of the industry's secret techniques and materials, have had to deal with risks imposed by gas companies at a moment's notice.

10. Increase in Truck Traffic

The increase in traffic will affect all communities, especially where congestion is already a problem. Unfortunately, any increase in traffic leads to an increase In traffic accidents. School bus accidents and chemical tanker spills have occurred in many communities as truck drivers try to negotiate winding rural roads at high speeds. The heavy trucks put extreme wear and tear on local roads and bridges, for which local governments largely pick up the tab.

Why Ohioans should be concerned:

Natural gas production produces wastewater: "fracking fluid" or brine, which is 10 times saltier than the sea and highly toxic. Because as a natural gas drilling product it is exempted from hazardous waste regulation, it can be injected untreated into Class 2 wells, which are not rated to accept hazardous waste.

These Injection wells have recently been associated with earthquakes in Arkansas, Ohio, and West Virginia.

PA is exporting its fracking wastewater to Ohio, where it is either injected into Class 2 wells or spread on roadways for salt and ice control.

In PA, of the roughly 6 million barrels of well liquids produced in a single year, the state couldn't account for the disposal method of 1.28 million barrels, more than a fifth of the total, due to weaknesses in its reporting system and incomplete filings by energy companies.