

Fracking Health-Effects 28-Mar-2012

Pare Down / Slow Down (< 6 min)

1 year Moratorium Data Blizzard Prudent Approach (allow time for...)

Selected Concerns: Health Effects

Medical Society of NY (1 year moratorium)

100 K\$ NYSDOH (SUNY) *Health Effects* Study (budget/dropped)

but it's only a little bit... (of what ?)

Exposures: Water / Soil / Air (chem. IDs / mixtures / dose / vulnerable: very young, old.)

Non-Disclosure / Agreements (Proprietary)

(PA): Patients / Clinicians

Impairment of: Data Collection / Peer reviewed Publications / Development of Medical Rx

Acute and Chronic Exposure Effects

Solubles / Volatiles (e.g., BTEX) Mut / Ca / Ter

Endocrine Disruptors (the dose dilemma)

(animals as sentinels: canary in the coal mine)

Reproductive

Growth and Development

Other Metals, Salts, RadioNuclides (U/Rm/Ra)

=====

1 year Moratorium (allow time for...)

Health Effects

Environmental (MegaVolumes of Waste-Water; Drinking Water

Economics

Road traffic

Regulatory Vacuum

GeoFault Tremors

Law Suits (can't afford... / can't afford not to...)

1 year Moratorium a prudent approach

Blizzard of data surfacing

Prudent Approach

Allow time for ... more data to emerge about health effects, xxxxxx

(National Energy Policy: Fossil/Gas, Nuclear, Renewables, Conservation; \$/wars/blood)

I would urge the Town Board to adopt a moratorium on hydrofracking. I would briefly mention two reasons.

First, time and again Rush residents say how much they value the rural character of the town. Our master plan reflects that basic wish of the residents. To allow hydrofracking in this town would significantly change the character of our town and conflict with the consensus we now have about the community in which we live.

Second, given what we know about hydrofracking and, perhaps more important, what we really *don't* know about safe drilling and gas extrication, this is a matter of public safety. The town board has an obligation to ensure the public safety of the municipality. Enacting a moratorium would fulfill this obligation in an important way.

Thank you.

Robert Kraus
2729 Pinnacle Road
Rush, NY

Wednesday, March 28, 2012

To the Rush Town Board,

My name is Carol Barnett, and my husband Ted and I are long-time residents of Rush. Ted is out of town this evening, otherwise he would be speaking as well. We are in favor of a moratorium on hydrofracking in Rush.

I would like to speak about the landscape in Rush. Some people might say it's nothing special. No large bodies of water, no mountains, no rolling hills. "Just" farmland and lots of open space. And yet it's beautiful, peaceful, and conducive to life. In fact, it's a good place to live.

Some of us would like to think that the beauty of Rush is a well-kept secret, but really, it isn't. Property values are good here. People know it's an easy commute to many job centers, and yet you have a peaceful retreat at the end of the day. Still, I think you have to live here to fully appreciate how beautiful it is.

There should be no doubt that hydrofracking would change the landscape of Rush, irreversibly. A moratorium will give us the chance to decide, as a community, if that is what we want.

There are many images of hydrofracking operations out there, both still photos and videos like the one taken by RIT students. You could take a field trip to Pennsylvania to see what hydrofracking does to communities, since that state has given itself over to hydrofracking. In fact, we should take a field trip to Pennsylvania. I think that no one should take a position on this issue unless they have seen what hydrofracking looks like.

Barnett-1

I feel strongly about other aspects of this issue, and without taking too much more time, I want to make the point, which I am sure others will make because it's so important, that fresh water is essential to life. Fresh water is more valuable than the hydrocarbons we would have to sacrifice it for in order to obtain. Even from a narrow economic viewpoint, fresh water is more valuable than hydrocarbons.

As the Town Board knows, we have circulated a petition to obtain signatures of those who are in favor of a moratorium on hydrofracking. We now have more than 150 signatures, and we have by no means combed the town, as we haven't had time to.

Finally I want to thank the Town Board and other boards for considering this issue with care and integrity. I don't think I speak only for myself when I say that we will stand behind the Town Board and support you no matter what happens on this issue.

Respectfully submitted
Carol H. Barnett

I strongly believe that the environmental degradation and health impacts outweigh the economic benefits of fracking. And I'm sure that in the long run, there are no benefits.

Natural gas is a fossil fuel and while it may burn cleaner than coal or oil, when it's extracted through hydrofracking, the carbon footprint is enormous. This issue was addressed by Jordan Kleiman at the forum that was held in our town in January.

Last November 9th, the International Energy Agency announced a record annual increase in the amount of carbon humans had poured into the atmosphere. I don't think we're going to run out of coal, or oil, or gas anytime soon. If we want to keep the planet from overheating, we're going to have to restrain ourselves. We're going to have to choose to keep these fossil fuels in the ground and turn to conservation and renewable sources for our energy needs.

Gas companies should not be given the rights of people. They don't have the ability to consider the greater good. They apply the logic of profit-above-all-else to the case of fossil fuels. Right now, they are producing way more gas than what we can consume.

The economic reality is that they can get \$16 in China instead of \$2.50 here in the US. Virtually every energy company reported record profits in 2011-record profits for any industry ever in the planet's history. Who doubts that gas companies will ship this resource to foreign countries for the highest price?

The crucial job for our time, and for our town is to somehow rein them in before more damage is done.

I support this moratorium as well as a total ban on fracking.

Beth Hoak 189 Rush Mendon Townline Rd.

March 28, 2012
Rush Town Board
5977 East Henrietta Road
Rush, NY 14543


Dear Rush Town Board,

As a landowner of farmland on the south side of Rush, and a life-long resident just over the Monroe County line in Livingston County, I am very invested in this area. Hydrofracking for gas and the supporting activities that accompany this very invasive industry could severely affect many things we all depend upon: Our health, safe roads, and local control of our land use. Personally, I am very concerned for the safety of our dairy cow herd potentially accessing unsafe water, due to an accidental or even intentional dumping of fracking waste that may never be addressed by the understaffed DEC.

As a town government, I ask you to protect our landscape, our public health and our future.

I am for a moratorium on fracking in Rush.

Thank you,

A handwritten signature in cursive script that reads "Clara Mulligan".

Clara Mulligan
5325 Barber Road
Avon NY 14414

March 28, 2012

To Supervisor Anderson and the Rush Town Board:

As a member of the Rush Conservation Board as well as a resident who deeply loves our town, I respectfully urge you to enact the proposed moratorium on hydrofracking in order to give us all time to better understand the implications of this potentially threatening activity.

Thank you for your important attention to this issue.

A handwritten signature in cursive script that reads "Patricia Kraus".

Patricia Kraus
2729 Pinnacle Road
Rush, N.Y. 14543

Thank you so much!

Marianne Rizzo

25 Still Rd.

Vertical drilling has been done in NY for many years, but as of today not one horizontal high volume well has been drilled in NY state. (as far as we know)

unlike vertical drilling,

Slick, High Volume, horizontal hydro fracking starts out vertical^{ly} and then it turns horizontal

A mixture of water, sand and chemicals are blasted 8,000 feet into the ground.
This creates a mini earth quake
The intense pressure breaks apart the rock and the gas is released.

Hydrofracking requires fracking fluid.

Fracking fluid is composed of 500 -600 chemicals. Among these hundreds of chemicals many are known human carcinogens. Others cause damage to the liver. Some damage the central nervous system and other organs. And some may cause damage to fetuses, and may cause genetic changes. Some of these chemicals are known as poison.

The chemicals are mixed with sand and **3- 9 million gallons of water** per well, per fracking event. A well can be fracked several times.

The fresh water that is used is removed from local streams and lakes.

To get an idea of amount of the chemicals used in each well, imagine 4 high school size swimming pools of chemicals.
This is approximately 935,000 pounds of toxic chemical additives.

The water and the chemicals are mixed with sand and blasted into the ground.

These methods are not regulated.

Since 2005

Oil and gas companies are exempt from **The safe drinking water act**

The clean air act

The superfund laws and many other regulations

This is commonly referred to as the Halliburton loophole.

How did this happen?

I thought that since the 1970's our country had these protections.

After each fracking event, the millions of gallons of hazardous wastes are pumped back up to the surface. ~~The entire~~ fluid is now highly toxic and it must be properly disposed of.

20 to 40 percent of this toxic mixture is left in the earth.

Where?

The toxic chemicals will travel into our water ways. Not if, but when?

~~When? We do not know. It depends on different variables.~~

It will migrate into our drinking water.

It will enter our streams and lakes. \

It will find its way into the ecosystem.

~~It may at first go undetected.~~

~~Or it may be detected sooner.~~

There are now hundreds of instances of contaminated wells across the county.

It will affect our health.

What we put into the earth travels into our bodies.

We are intimately connected to the earth. Everything we use in our lives comes from the water, the earth and the sun.

What we put into the air and water will travel to the bodies of ourselves, and into the bodies of our children and into the generations to come.

The chemicals are already migrating into the bodies of animals. According to the Cornell Chronicle, "a new report has found dozens of cases of illness, death and reproductive issues in cows, horses, goats, llamas, chickens, dogs, cats, fish and other wildlife, and humans. ~~It says these conditions are most likely the result of exposure to gas drilling operations.~~"

In one case, a farmer reported that 140 of his cows were exposed to hydrofracking fluid. Of the 140 cows, about 70 died, and there were high incidences of stillborn and stunted calves.

Some parts of the country are willingly putting toxic wastes into the ground. It is incomprehensible.

Slick, high volume, horizontal hydrofracturing

What is slick? I wondered. I learned that

Slick is the concept of **trade secrets**. "Trades Secrets" mean it has been legal for the gas companies to keep the chemicals a **secret** from the public. A "trade secret" they say. A company secret.

Slick is the money that the gas companies spend on advertising to convince the public

that high volume **horizontal hydrofracking** is safe.

What is the slick in high volume hydro fracking? **Slick** is the campaign contributions to the politicians. *of which there are many.*

Slick is **also** the non-disclosure agreements following lawsuit settlements.

There is a widespread use of nondisclosure agreements when settlements have been reached between the companies and farmers who claim their animals or families have been harmed by hydrofracking. ~~The companies involved in hydrofracking resist sharing information about the chemicals used and the actual process itself because they feel it is proprietary.~~

Slick High Volume Horizontal Hydrofracking has not been studied in its high volume impact.

How do we explain this to our children? **We industrialized your landscape.** We contaminated your earth, your home.

The gas was sold to the highest bidder, here and abroad. Mostly, right now the highest bidder is in China.

I had once thought of hydrofracking as a "devils bargain," but now, I conclude that there is no bargain at all in this this process for any living thing. There is no bargain here for the citizens of New York. No bargain for the people of Rush.

Slick high volume horizontal hydro fracking is a complex matter. There is so much to learn. It is both smart and essential that we pass a moratorium.

We must ensure the health of our community now and for generations to come.

Town of Rush Public Hearing on the Moratorium Ordinance

Respectfully submitted to the Rush Town Board on March 28, 2012, by Jordan Kleiman

855 Five Points Rd., Rush, NY 14543

Phone: 585-533-2025

Email: jorbenk@gmail.com

My name is Jordan Kleiman. I have been a homeowner in Rush for eight and a half years. As a professor of history at SUNY-Geneseo, I specialize in the history of technology and the environment in modern America. I'd like to focus my comments on the necessity of municipal protection in light of the well-documented risks that shale-gas development poses to the environment, public health, local & regional economies, & the quality of life in rural communities like Rush. The necessity for local protection stems from the regulatory vacuum at the federal & state levels. That vacuum has a well-documented history that we all need to be aware of:

- mid-1990s: private water well contamination in Alabama (due to fracking methane coal beds) led to a lawsuit against EPA (for failing to regulate fracking sufficiently in that state):
 - prompted EPA to initiate a nationwide study of the risk that fracking in methane coal beds poses to underground sources of drinking water (began in 2001)
 - 2004: EPA released its findings, concluding that fracking:
 1. "poses little or no threat" to water sources (exception: diesel fuel in frack fluids)
 2. "does not justify additional study"
 - led environmental engineer Wes Wilson (36-year EPA regulator) to seek federal whistleblower protection & criticize EPA for conducting a "scientifically unsound" study:
 - eg, 5 of 7 members on the review board had ties to the gas & oil industry¹
- gas & oil industry (& gas- & oil-state politicians) had been trying for years to have fracking exempted from the Safe Drinking Water Act (1974), which regulates injection wells (et al)
 - they now gleefully used EPA's coal-bed methane study (against EPA's wishes) to justify that exemption, which was inserted in the Bush Admin.'s Energy Policy Act of 2005:
 - explicitly forbid the EPA from regulating fracking under the Safe Drinking Water Act
 - ["Halliburton Loophole" (secretive role of Dick Cheney's Energy Task Force²)]
- fracking is also exempted from at least 6 other major federal environmental regulations:
 - Clean Air Act (1970)³
 - Clean Water Act (1972)⁴
 - Resource Conservation and Recovery Act (1976)⁵
 - Comprehensive Environmental Response, Compensation, & Liability Act ("Superfund")⁶
 - National Environmental Policy Act (1970)⁷
 - Emergency Planning & Community Right-to-Know Act (1986)⁸
- thus the fed govt has left regulation of fracking largely in the hands of state agencies:
 - typically underfunded & understaffed
 - have looser standards than the federal govt
 - fragmented information (state regulatory agencies don't communicate with each other)
- the multitude of serious flaws & omissions in NY's SGEIS are an object lesson in the hazards of leaving regulation to the states⁹--2 prominent examples will suffice:
 1. the state has failed to propose a viable waste-disposal plan for hundreds of millions of gallons of toxic wastewater that will be generated by fracking operations
 2. the state has failed to undertake a comprehensive public health assessment¹⁰ (despite ample evidence of substantial health risks,¹¹ & SEQRA's definition of "environment")
 - prompted the Medical Society of the State of New York to call for a moratorium¹²

- Heinz Award-winning biologist Sandra Steingraber correctly asserts that NYS is on the verge of launching “an uncontrolled human experiment using all of us as study subjects.”¹³
- despite such deficiencies, NYS’s de facto moratorium on “high-volume, horizontal hydraulic fracturing” will expire as soon as DEC finalizes its EIS & proposed regs (a few months)
- in the meantime, the EPA launched a nationwide study of fracking’s impact on water quality¹⁴ (prompted in 2009 by Wes Wilson’s criticisms of the coal-bed methane study):
 - while this study ignores a host of other impacts (eg, toxic contamination of air & soil), it still represents the broadest study to date
 - preliminary results due out later this year; full results due out in 2014
 - yet the Cuomo Admin. wants to green light fracking in NYS before the study is complete:
 - Joe Martens says we likely won’t learn anything new from the EPA study
 - & Cuomo himself insists he’ll base his fracking policy “on science and not emotion”¹⁵
- so that’s where we stand with respect to regulation:
 - the regulatory vacuum at the federal & state levels has forced municipalities to find ways to protect themselves on the local level by enacting moratoria & bans:
 - as of March 21¹⁶:
 - over 90 municipalities have passed moratoria or bans
 - including 2 in Monroe Co.: Mendon & Brighton
 - 65 municipalities are in the staging process for protective legislation
- we’re fortunate in NYS--our neighbors in PA are subject to the newly passed Act 13—an industry-friendly Falstian bargain:
 - a state-level impact fee in exchange for undermining democratic rights & public health
 - allows the state to unilaterally invalidate local zoning laws
 - allows the gas industry to seize private property (eminent domain) to further its interests
 - muzzles doctors with nondisclosure agreements when they try to treat patients exposed to the gas-industry’s toxic chemicals (a threat to public health)

In conclusion, our Town Board members should be congratulated for acting expeditiously on the ordinance under consideration, which was proposed by the citizens of Rush back in January. The one-year moratorium will provide the time needed for our town officials to work with concerned citizens to develop policies that will protect residents and businesses from all potential negative impacts of fracking and related activities, and will preserve our rural small-town character.

¹ Weston Wilson letter to Senators Wayne Allard and Ben Nighthorse Campbell and Rep. Diana DeGette (all from Colorado) (see my file); the study also didn’t follow EPA’s own protocol—e.g., instead of conducting its own water testing; EPA relied on testimony of state regulators

² Cheney was Halliburton’s Chairman and CEO from 1995-2000.

³ exemption from aggregation & hydrogen sulfide

⁴ exemption from stormwater run-off rules

⁵ exemption for oil & gas waste

⁶ benzene, toluene, ethylbenzene, & xylene (Btex chemicals: exempted from CERCLA's liability rules

⁷ exemption from federal EIS procedure (thus from public comment)

⁸ oil & gas industries exempted from reporting toxic substances to Toxic Release Inventory

⁹ It should be noted that neither the fed govt nor other states have done much better on assessing the health risks of fracking, as demonstrated by a Jan 2012 peer-reviewed study:

- the authors examined 3 govt advisory commissions established in 2011 to evaluate fracking
 - governors of PA & MD, & Obama's [SLIDE]
 - found that "of the 52 members...none had any background in any health field"

¹⁰ The SEQRA process includes "human health" in its definition of "environment": The Glossary for SEQRA (see my public health file) states: "Environment means the physical conditions that will be affected by a proposed action, including land, air, water, minerals, flora, fauna, noise, resources of agricultural, archeological, historic or aesthetic significance, existing patterns of population concentration, distribution or growth, existing community or neighborhood character, **and human health.**" [emphasis added]. Accordingly, Gov. Patterson's Exec. Order #41 (2010) directs DEC to "ensure that environmental *and public health impacts* are mitigated or avoided" (my emph.)

¹¹ Unfortunately, the medical research on fracking is scant. Adam Law, "How Environmental Contamination Can Impact Human Health, the Endocrine System in Particular," paper presented at the Upstate Medical University Public Health Symposium on "The Health Implications of Hydrofracking," April 13, 2011.

¹² Also, over 250 physicians, public health professionals, & medical orgs. (inclgd. the American Academy of Pediatrics) to send a letter to Gov. Cuomo calling for an independent health impact assessment (Oct. 5, 2011) *before* drilling permits are issued

¹³ Steingraber, NYS Assembly testimony (Oct 6, 2011)

¹⁴ a tacit admission that its 2004 coal-bed methane study was flawed

¹⁵ Scott Detrow, "Is Cuomo Cribbing Corbett's Fracking Talking Points?" (NPR). Actual quote: "make the decision based on science and not emotion"

¹⁶ From Kueka Citizens Against Hydrofracking (Joe Hoff).

Presentation for Public Hearing March 28, 2012

I am Carolee Powers, and live on Phelps Road, just off Works Road. For over 20 years now we've enjoyed well water and our spring fed natural pond. I want to support your action to enact a one-year moratorium on HVHF here in Rush, so I can continue to enjoy the waters here.

I see so many unsafe and unregulated things about HVHF, I can't possibly mention them all. For a couple of years now, I wanted to believe that if everyone was informed that it simply would not occur. Now I see that even though there's a lot of information out there (and a thanks to you all who provided the binder full of information available for the public in our library), many people are still not informed. On top of that we are lacking concrete studies about the results of hydrofracking. A partial study by the EPA is due to be completed in 2014, but preliminary results will be available this coming year. More studies are being done, and we are getting reports from other states that are currently drilling – most notably near us, Pennsylvania. These reports are very alarming. Still, some would urge us to just frack & see what happens, then deal with the consequences. The consequences are too drastic and wide ranging to permit this. We must have time to help people become informed, and for more facts and legal decisions to happen.

I will just focus, now, on what we are doing to our waters.

I swim daily on our property in a lovely natural spring fed pond. It is the summers lifeblood of my health. If the water table was to drop really low, or if chemicals from underground were to seep into this water, I would be very upset. I've felt the alarm of what happens when we run out of water: people near us recently had their wells run dry because of the operations of a near-by gravel pit. Happily the town moved in on this – but I know the fear it raised in me. And that isn't even the water I drink!

What would hydrofracking do? It takes 5.5 million of gallons of fresh water to frack just one well – and the DEC has said NYS could build 60,000 over the “next generation” of wells. Then, just as alarming, it takes 550,000 gallons of highly toxic “slick” water to facilitate the flow of these waters. This amount of water is hard to imagine – there are 100 million gal of water in Cobbs Hill Reservoir – that would allow only six or seven wells to each frack three times! Not much of a dent in 60,000. Benzene is just one of the toxic chemicals used – currently the oil companies don't even have to list the 500 chemicals they use! Our regulatory laws are not in place. This is part of why we need a moratorium.

Then there's the issue of what happens to the millions of gallons of water after it has been forced into the ground. The oil company's say 40% returns to be disposed of – 60% says beneath the ground. Pennsylvania has sold some of its waste water to the towns (it's 10% salt water) to spray on the roads. How about the (unlisted) chemicals that go with that? Could this happen here in Rush? Could it end up in our streams? Frackers will have a BIG problem getting rid of all that chemically infused, industrial waste water. Then,

2.

what about the 60% below ground – where does that go? We've not had time to really study this, but there is some information about the fracking lines below us. Our library is sponsoring a talk with a geologist from Geneseo that will explain some of what he knows on April 18th. Please sign up to come to this – it should be very informative.

In summary – We need time to further explore the ramifications of HVHF in our community, and to adjust our zoning and town plan to be absolutely clear (all the loopholes and possibilities for variances plugged) that nothing Rush and its waters, air, roads, and lands are protected – to maintain the current character of our beautiful town.

Carolee S. Powers in Rush (757 Phelps Rd)

A handwritten signature in cursive script that reads "Carolee S. Powers". The signature is written in black ink and is positioned below the typed name.

Hydrofracking Moratorium

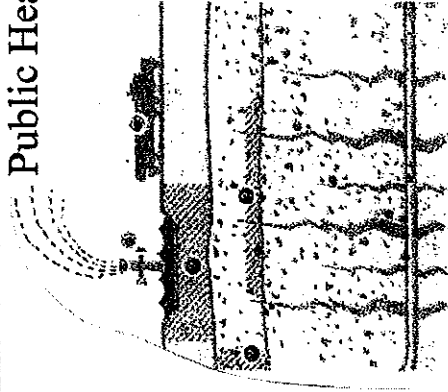
Public Hearing



Wednesday, March 28, 2012, 7:15PM
At Rush Pavillion (in back of library)

Hydrofracking Moratorium

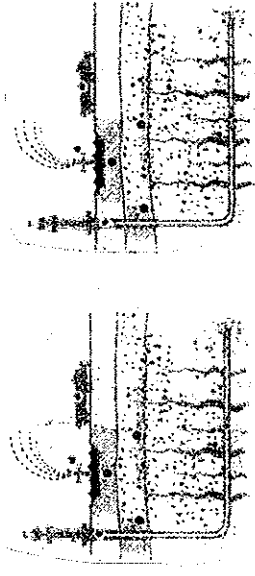
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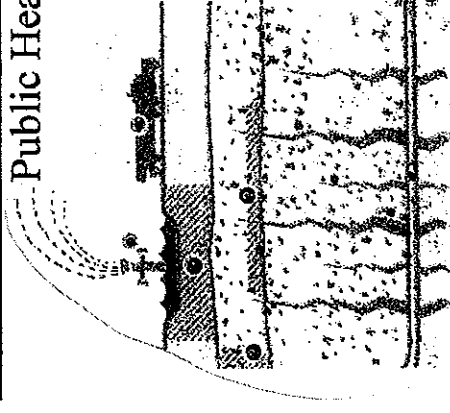
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