

## IMPACTS OF HYDROFRACKING

Presented by the Citizens Working Committee on Hydrofracking (CWCH)

Thank you for viewing the video footage of hydrofracking operations in Pennsylvania, from a trip taken on October 20, 2012, by members of the CWCH and other interested Rush citizens. If you would like the link to the video, search for it on YouTube or email Ted Barnett at [ted.d.barnett@gmail.com](mailto:ted.d.barnett@gmail.com) Please keep in mind these important facts:

**FRESH WATER USAGE:** High volume slick-water hydrofracking for natural gas, or hydrofracking, uses millions of gallons of fresh water, between 2 and 9 million gallons per fracked well, with each well fracked as many as 10 or more times. The wells we saw were licensed to withdraw up to 4 million gallons of water from local water sources per day for 5 years, the duration of the permit period.

**CHEMICAL EXPOSURE:** The water used in this process is combined with tens of thousands of gallons of chemicals (for each fracking of each well), many of which are known neurotoxins, carcinogens, mutagens, and endocrine disruptors. These include the BTEX chemicals (benzene, toluene, ethylbenzene, and xylene) and VOC's (volatile organic compounds).

**ADDITIONAL TOXICITY:** Hydrofracking fluid, when it comes back to the surface, carries added substances from deep in the earth, including salts, heavy metals, hydrocarbons, and radioactive materials.

**WASTE DISPOSAL:** What to do with the hydrofracking fluid is a major problem, for which New York State has yet to propose a workable solution. There is no known way to treat the fluid to return it to its potable state. Therefore this water is effectively removed from the hydrologic cycle, except for water that evaporates from retention ponds. Waste water disposal is expensive and prohibited in many communities, which invites cutting corners, surreptitious dumping, and outright violation of agreements and laws.

**FAILURE OF GAS WELL CASINGS:** The gas industry's own statistics indicate that more than 5% of wells fail (i.e., leak) immediately. Industry statistics also show a well-failure rate of 50% over a 30-year time frame. All wells will eventually fail, as cement deteriorates and steel corrodes. When well casings fail, hydrofracking fluid gets into the water table.

**WATER TABLE CONTAMINATION:** The people we saw with "water buffaloes" (receptacles for water to replace their contaminated water systems) lived in proximity to gas wells which are under investigation for failed well casings. Only sometimes did the gas company pay for the replacement water, and only after considerable legal or political pressure (even then, the gas industry rarely admits wrongdoing, and will impose a nondisclosure agreement or "gag order" as a condition of payment). Many people have to pay for the replacement drinking and household water themselves.

**SURFACE CONTAMINATION:** There are also many opportunities for surface contamination by hydrofracking chemicals via spills, overflow of waste retention ponds, traffic accidents, etc.

**AIRBORNE POLLUTION:** Hydrofracking exposes residents to significantly elevated levels of ground-level ozone, which can aggravate asthma and other respiratory ailments and can cause permanent lung damage. Diesel fumes from trucks, as well as the organic compounds used in and generated by fracking, are carcinogenic. Methane escaping from the fracking process is the most potent of greenhouse gases.

**THE TRUTH IS HARD TO GET AT:** Once hydrofracking enters a town, people are reluctant to complain about changes to their water and other adverse impacts, for fear of a negative effect on their property values. Sometimes people accept “gag orders” as a condition of getting some modicum of help from the gas industry.

**INDUSTRIALIZATION OF THE LANDSCAPE:** Hydrofracking activity with all of its stages--drilling, fracking, production, compression, and distribution via pipeline--replaces green pastures and woodlands with concrete pads and machinery. Truck traffic on once quiet, rural roads is continual, with approximately 1200 round trip truck trips per well. Noise and chemical odors are a constant accompaniment of the gas-producing process.

**CASCADE OF DEVELOPMENT:** Once the gas industry makes an investment in infrastructure, such as building an extensive system of compressor stations and pipelines, and preparing roads for increased truck traffic and heavier loads, it has every incentive to maximize its development within a community to achieve economies of scale. The chance of the town having "just a few wells" is very slim. We were told that the towns we visited had reached only 25% of their potential hydrofracking development and possibly much less--i.e., they were slated for at least 3X as much additional development.

**OTHER ADVERSE IMPACTS:** Hydrofracking brings with it a number of other problems, such as insurance and mortgage issues, and an unfunded mandate requiring towns to provide additional social services, emergency response capabilities, road repair and maintenance, etc. These issues accompany the physical impacts of hydrofracking of which you see evidence in the video.

**CHANGES BOTH VISIBLE AND NOT-SO-VISIBLE:** One of the most disturbing realizations during our trip was how hydrofracking has divided the residents in the communities we visited, and how it has fundamentally altered the character and reputation of their small towns and changed forever their pristine, rural land. We observed an atmosphere of hostility and resentment among the residents that has degraded the quality of their life, along with the physical impacts they have experienced.

**IMPLICATIONS FOR THE RURAL CHARACTER AND QUALITY OF LIFE IN RUSH:** In surveying the impact of hydrofracking on the northern tier of Pennsylvania, we were struck by how incompatible it seemed to be with the Town of Rush's own Comprehensive Plan and especially the high value our community has historically placed on the rural character of the town.