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Don't Frack with Us: Our Bodies, the World's Water

"PEACE BEGINS AT HOME."

What is Fracking?

Fracking, also known as hydraulic fracking and hydrofracking, is a **process in which a pressurized cocktail of water, sand and a variety of chemicals is injected thousands of feet underground to crack open dense rock formations**, which are usually made of shale, tight sandstone or coal.

This releases **natural gas**, which is one of the major energy sources used for heating and electricity. In the United States, natural gas has been used as a source of fuel for nearly two centuries. Fracking is not a new technique used to obtain natural gas, but it was only in 1997 that modern-day fracking was first used. New fracking techniques, which have increased the pressure and vol-

ume of the chemical cocktail injected underground, have been a boon for the oil and gas industry, opening up previously inaccessible rock formations and increasing access to natural gas.

But the boon for the oil and gas industry has been a burden for those who have been exposed to the pollution that has resulted from a more **lethal fracking process, one which pollutes with huge volumes of toxic chemicals**. Modern-day fracking has resulted in: **serious air pollution, contaminated groundwater, poisoned wells, explosions, and widespread health problems, as well as leaks and spills into soil, streams, and rivers.**



Environmental Risks of Fracking

◆ Depletion of Water Resources

Anywhere from 2-10 million gallons of water will be used to frack a well just once. Of the millions of gallons of water used, only 30-50% comes back up from the well, the rest remains trapped underground. The fluid both aboveground and belowground can be extremely toxic. This means that most of the 2-10 million gallons of water essentially disappears, because most of it cannot be returned to the watershed.

◆ Water Pollution

Fracking injects 80-300 tons of chemicals, a great number of which are toxic, and enormous amounts of water into

rock formations to frack. Because some fracking fluid remains trapped underground after a well is fracked, hazardous materials and carcinogens leech into and contaminate groundwater. Additionally, toxins in fracking wastewater can flow through treatment facilities and into rivers and streams, contaminating water supplies for downstream communities.

◆ Air Pollution

The processes of drilling and fracking result in releases chemicals, many of which are toxic, into the air. These toxins can be transported hundreds of miles, contributing to smog. Some have even been linked to global warming.

◆ Earthquakes

Once fracking fluid comes back up from the well, most of it is injected back underground to frack a different well. This has been found to cause earthquakes. In the Fort Worth, Texas area alone, fracking has resulted in more than a dozen earthquakes since October 2008.

◆ Explosions

An April 2011 Duke University study found average methane concentrations in shallow drinking water in active natural gas drilling areas were 17 times higher than those in non-active areas. Such high methane concentrations are considered potential explosion hazards.

Toxins and Human Health

The exact formula of fracking fluid is unknown, because currently the natural gas industry does not have to report the makeup of the fluid. Numerous studies, however, prove just how dangerous to human health this fluid can be.

In January and April of 2011 the U.S. government's **House Energy and Commerce Committee found that fracking fluids contained 750 chemi-**

als, some of which were very hazardous to human health, including benzene and lead. Fracking fluids also included **diesel fuel, which contains carcinogens such as benzene and toluene.** This is the only fracking chemical that requires a permit.

In September 2010, the Endocrine Disruption Exchange found that **25 percent of fracking chemicals could cause cancer;**

37 percent could disrupt the endocrine system; 40-50 percent could affect the nervous, immune and cardiovascular system; and more than 75 percent could affect the skin, eyes and respiratory system, resulting in problems like skin and eye irritation or flu-like symptoms.

The Precautionary and Guardianship Principles

The 1998 Wingspread Statement provides a summary of the **Precautionary Principle**: "When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically."

Though the connection between fracking and the precautionary principle may not be obvious, it is extremely important. The precautionary principle explains why it is necessary to put a stop to fracking. Simply put, **fracking should**

be stopped, at least until it can be proved that it is *not* harmful, because the evidence that is available provides reason enough to believe it *is* harmful.

Decisions made about fracking must be guided not only by the precautionary principle, but by the idea that **the earth must be safe-guarded for the generations to come.** According to this idea—the **Guardianship of Future Generations**— the people currently alive, **the people on earth are explicitly responsible for protecting humanity and the web of life to which all belong.**

Action Against Fracking: The World and WILPF

- France and Bulgaria are the only countries in the world who have banned fracking, due to strong public opposition.
- International efforts to ban fracking are also underway— many of the nations, though not all, are also members of the EU.
- Vermont is currently the only state in the United States that has banned fracking
- WILPF Branches in Ohio, North Carolina, and California are working hard to ban fracking, and efforts in other states are underway.
- To take action in your community, go to: www.foodandwaterwatch.org/take-action/in-your-community/

Climate Change and Fracking

Fracking produces natural gas, a fossil fuel which has been hailed in the U.S. as the new clean energy source. Because fracking is the easiest, most cost-efficient way to access natural gas, the natural energy industry and invested organizations have gone to great lengths to dispel rumors that **fracking contributes enormously to global warming.**

These rumors, however, are truth.

Cornell University released a study in March 2011 which found that **shale fracking could have a greater effect on climate change than coal and oil over the life cycle of its production.** Though fracking releases less carbon dioxide, **fracking releases high vol-**

umes of the greenhouse gas methane.

A 2009 study published in *Science Magazine* finds that **methane has as much as 105 times the global warming potential as carbon dioxide by weight over the first 20 years after its emission** and as much as **33 times the global warming potential over 100 years.**

Methane emissions created from fracking shale rock are at least 30 percent higher than those created from conventional gas drilling. The EPA estimates that **methane traps 21 times more heat by weight than carbon dioxide,** the most prevalent and well known greenhouse gas.



Take Fraction!

1. Tell your Congressperson to **oppose H.R. Bill 1380**, The New Alternative Transportation to Give Americans Solutions Act, also known as the NAT GAS Act. Visit foodandwaterwatch.org. This bill would funnel \$5 billion into the natural gas industry, which would both increase the amount of fracking being done and make the U. S. dependent on another harmful, polluting fossil fuel source.
2. Tell your Senators and Representatives to **support The FRAC Act**. Formally titled "The Fracturing Responsibility and Awareness of Chemical Act," the twin bills in the Senate (S. Bill S587) and House (H.R. Bill 1084) would repeal the exemption for fracking in the Safe Drinking Water Act. It would require the energy industry to disclose the chemicals it mixes with the water and sand it pumps underground in the fracking process, information that has largely been protected as trade secrets.
3. Ask your Congressperson to **co-sponsor H.R. Bill 4025**, Congressman Markey's Keep American Natural Gas Here Act, which will prevent cheap natural gas from being exported to foreign countries. This bill will ensure that the U.S.'s natural gas industry does not expand to make profits off of exports. It ensures that water resources in the U.S. are not polluted for the

- benefit of foreign nations and the natural gas industry's pocket.
4. Tell your Congressperson to **support H. R. Bill 4024** North America Natural Gas Security and Consumer Protection Act. This bill would prohibit the Federal Energy Regulatory Commission (FERC) from approving any new facilities, capable of exporting domestic liquefied natural gas, until 2025.
5. **Join the Global Frackdown!** The Food and Water Watch has named September 22, 2012 as the global day of action to ban fracking in communities all around the world. To join the efforts to ban fracking, visit: <http://www.globalfrackdown.org>
6. Visit gaslandthemovie.com to **learn more about the film Gasland**, which exposes the harsh realities and consequences of fracking. Learn how to become an active anti-fracking advocate by visiting the "Take Action" section of the website.
7. **Do your own research— learn more about fracking with WILPF!** Go to WILPF's website to learn more about fracking and about WILPF members' work with the Earth Democracy Issue Committee website: www.wilpf.org. Also, visit foodandwaterwatch.com to learn more about fracking and about how you can take action. Sign the petition to ban fracking and find out how you can join the Campaign to Ban Fracking!