What's in the water?

Find out how hydraulic fracturing works — and how it can affect the water you drink.

1. Benzene
   Benzene is a part of the diesel fuel that is often used as a fracking fluid. It can cause leukemia — even in quantities as low as 0.005 parts per million.

2. Arsenic
   A Pennsylvania farmer — the largest supplier of heirloom tomatoes on the East Coast — found levels of arsenic at 2,600 times the EPA's standard in the water on his land.

3. 2-Butoxyethanol
   A mother developed a rare tumor of the adrenal gland after drinking water contaminated with the common fracking chemical 2-butoxyethanol near a fracking operation in Colorado.

4. Methanol
   Hydraulic fracturing uses more methanol than any other chemical. Even a few ounces of it can cause blindness.

5. Naphthalene
   The EPA found naphthalene, the cancer-causing chemical that moth balls are made from, in water testing wells drilled near fracking sites in Wyoming.

And that's just the beginning...
What the Frack?

Hydraulic fracturing—with all the associated processes—called fracking, is a way to extract natural gas from shale rock deep underground. Fracking* chemicals, water, and sand are forced under massive pressure into underground layers. The layers crack and release the gas, which is then directed to the surface and used as a source of energy after cleaning and processing.

Fracking is now taking place in 35 states. In many of those states, fracking chemicals, gas, and other substances have already contaminated drinking water supplies and harmed human, animal, and environmental health.

And now fracking is happening in the Marcellus and Utica shale layers in the Ohio River Basin. The Ohio River itself, is the drinking water source for more than three million people in six states including five major cities.

*Fracking* is a general term used to refer to all of the industrial activities involved in gas production—including the specific technique of hydrofracturing rocks.

**According to the US Department of Energy, U.S. shale gas production has increased 13-fold over the last decade and this trend is expected to continue through at least 2035, rising from 6 trillion cubic feet per year in 2010 (23% of total U.S. dry gas production) to 13.6 trillion cubic feet per year in 2030 (49% of total U.S. dry gas production).

Fracking's air and water pollution causes documented severe health problems wherever it's done. As more and more people are impacted by fracking, the problem grows more alarming.

**Why Now?**

It's a boom and bust resource: prices have skyrocketed, collapsed, and then soared again since fracking started. Fracking (an expensive technology) was established in high resource areas and continues to be pursued without regard to human health, the environment, or overall economic benefit.

**History of Fracking in the U.S.**

- 1949: Low-pressure fracking first used in Oklahoma & Texas
- 1965: Clean Air Act
- 1972: Clean Water Act
- 1974: Safe Drinking Water Act
- 1980: Superfund
- 1998: First low-pressure horizontal fracking well drilled in Texas

**How big is the impact?**

% of each state's population whose drinking water comes from the Ohio River Basin

- PA: 26%
- WV: 86%
- OH: 64%

Each fracked well produces millions of gallons of toxic radioactive waste.

**Health in Danger!**

With more than 2,800 wells drilled and more every year, the map shows where thousands of people in the Ohio River Basin are at risk of drinking contaminated and unsafe water, endangering their health.
DON’T DRINK AND DRILL!

Preparation
1. Gas companies pay for 10 acres of land and wish to drill for oil and gas. The process is not renewable and is more harmful to the environment.
2. The company creates a plan to drill and provide water for the land.
3. The company runs pipelines to transport the water.

Lease
1. The company pays for 10 acres of land and wish to drill for oil and gas. The process is not renewable and is more harmful to the environment.
2. The company creates a plan to drill and provide water for the land.
3. The company runs pipelines to transport the water.

Fracturing
1. The gas companies install the equipment and begin the process.
2. The water is pumped into the ground at high pressure.
3. The water breaks the rock and releases the gas.

Depletion
1. The gas companies continue to extract the gas from the ground.
2. The process is not sustainable and is harmful to the environment.

Your Water Supply is in Trouble!
1. 15.6 million people get their drinking water from upstate, they’re about to get fracked.
2. Find out how to take action now at: DamascusCitizens.org

WATER CONTAMINATION
1. Water pollution can happen at any location in the Marcellus Shale.
2. Chemicals are used in the drilling process, which can contaminate the water.
3. The high pressure of the drilling process can also contaminate the water.

AIR POLLUTION
1. Drilling, fracking, and gas stations all emit pollutants, which can be harmful to people and the environment.
2. The pollutants can affect the health of people and the environment.

TOXIC CHEMICALS
1. Fracking fluids contain toxic chemicals, which can leach into the ground and contaminate the water.
2. These chemicals can be harmful to people and the environment.

FUTURE CHAIN
1. Toxic chemicals and air pollutants can also affect the future generations.
2. The pollutants can affect the health of future generations.

ECONOMIC IMPACTS
1. Fracking can cause job losses in various industries, which can affect the economy.
2. The economic impact can also affect the healthcare and education systems.

RADIATION
1. Fracking can also lead to radiation, which can be harmful to people.
2. The radiation can affect the health of people and the environment.

Protecting Our Public
1. Fracking is not a safe way to extract gas and should be banned.
2. We need to protect our water and the environment.

DON’T DRINK AND DRILL!

1. Fracking is coming to a drinking water supply near you. Here’s how it works and why you should care!
2. Between 4,000 and 80,000 wells could be drilled in the Marcellus Shale.
3. Your water supply is in trouble!
4. 15.6 million people get their drinking water from upstate, they’re about to get fracked.
5. Find out how to take action now at: DamascusCitizens.org

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More than 25 million people in Pennsylvania, West Virginia, and Ohio get their drinking water from the Ohio River Basin.

That water is at risk. Hydraulic fracturing is a process that forces water, sand, and chemicals into underground cracks, under high pressure, in order to release natural gas. It causes air and water pollution, contaminates drinking water supplies, kills animals and plants, and poses serious risks to humans.

And it’s threatening your drinking water.

Find out how hydraulic fracturing works, what can go wrong, and what you can do to protect your drinking water today.

For more information and documentation on these fracking facts, visit: DamascusCitizens.org/Ohio-references