



FRACKING FACTS

PROTECTING AMERICANS FROM THE RISKS OF FRACKING

Natural gas development has exploded at break-neck speed in recent years, fueled by advancements in an extraction technique known as hydraulic fracturing—or fracking—that has allowed the oil and gas industry to access previously out-of-reach reserves.

Unfortunately, federal and state safeguards to protect people and the environment from the hazards of fracking have not kept pace. As a result, this development has proved dangerous, destructive, and polluting.

This unbridled growth of fracking has allowed the gas industry to run roughshod over communities, leaving a host of serious impacts in their wake—from poisoned water wells, to contaminated rivers and streams, toxic air pollution and devastated property values in towns, and rural areas across the country.

This has to change.

First and foremost, we need our leaders to prioritize more efficient, cleaner, safer, and renewable sources of power that will not poison our health or our water. Second, we must take sensitive, risky and vulnerable areas off the table for gas development. Third, wherever gas development is occurring, we need effective safeguards on the books to ensure that Americans no longer have to sacrifice their health, safe drinking water, and property values for oil and gas company profits.



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WHAT IS FRACKING?

Fracking involves mixing large quantities of water and sand with dangerous chemicals, and blasting it into wells at extremely high pressure in order to release oil or natural gas deposits trapped in rock. Sometimes this can take place as little as 100 feet from homes or drinking water supplies.

The fracking process requires considerable amounts of water, involves the use of toxic chemicals, necessitates huge amounts of truck traffic, and produces large quantities of highly polluted wastewater. At any given stage of this process, there are numerous environmental and public health threats. It can contaminate drinking water supplies, generate substantial air pollution emissions, destroy habitat and landscapes, and fundamentally transform rural communities.

Fracking is currently taking place in approximately 30 states, without sufficient safeguards and typically under outdated regulations and inadequate enforcement. The oil and gas industry is seeking to expand fracking nationwide to extract gas from previously inaccessible sites, including shale formations, tight sands, and other so-called “unconventional gas plays.”

Over the last decade, the industry has drilled tens of thousands of new wells in the Rocky Mountain region, the South, and the eastern United States. In the East, the latest hotbed of activity, the focus has been on a massive 600-mile-long rock formation called the Marcellus Shale, which stretches from West Virginia, through Ohio and Pennsylvania, and into New York State.

WHAT ARE THE ADVERSE IMPACTS OF DRILLING ON COMMUNITIES, THE ENVIRONMENT AND PUBLIC HEALTH?

Communities across the country have experienced a wide range of negative impacts from natural gas production.

Drinking water sources have been contaminated with explosive methane, as well as other dangerous substances, such as benzene and arsenic, that can cause cancer and other serious illnesses. Toxic chemicals, as well as erosion and runoff from drilling operations, have fouled treasured fishing streams and aquatic habitat. Leaks and spills of hazardous materials have polluted bodies of water, forests, farms, and backyards. Farmers and ranchers report serious health symptoms in livestock near natural gas operations. Exposure to open pits has killed countless birds and other wildlife. Emissions from drilling rigs, well-pad equipment, storage tanks, compressor stations, and truck traffic contribute to harmful ozone levels. The wells, roads, and pipelines that come with natural gas development can displace wildlife and fragment their habitats. And methane emissions from production sites and pipelines contribute to climate change pollution.

There have even been incidences of serious human health threats that have led families to abandon their homes in order to preserve their children’s health.

CAN DRILLING FOR NATURAL GAS BE MADE SAFER?

Yes. While virtually nothing can be made completely safe, drilling and fracking can be made safer than current operations. This is only possible if the federal and state governments act to adopt strong, enforceable laws and standards that protect the environment, public health, and communities. These must also be backed by adequate government oversight, and accompanied by corporate policies that have zero tolerance for avoidable errors. Right now, however, that is not the case.



Cost-effective technologies exist that allow natural gas to be produced in an economical but more environmentally responsible way. For example, harmful air emissions, including methane, can be captured with the right equipment, toxic wastes can be managed in safer ways (including prohibiting their collection in open-air pits), and gas wells can be made stronger to reduce the risks of drinking water contamination from blowouts and other problems.

Some states and local governments have begun updating their rules and requiring cleaner operations. For instance, Wyoming has established better air quality protections, New Mexico has improved its waste management rules, and Colorado is working to curb stormwater runoff from fracking operations. Compared to the benefits, the costs associated with these best practices are minimal.

But while these states have taken some positive steps, they are limited and isolated examples. Most federal and state regulations have not kept up with advancements in our knowledge of the risks or with the latest technology. That is why industry can and should immediately be required to implement existing common sense, cost effective solutions to universally increase protection for human health, communities, and the environment.

New, comprehensive state and federal protections must be put in place to address, among other key safeguards, the following:

- **Reducing water pollution** by improving well construction, waste management, and monitoring of fracking operations, and requiring oil and gas corporations to comply with the sections of the Safe Drinking Water and Clean Water Acts from which they are currently exempt.
- **Reducing air pollution** by minimizing emissions that harm public health and contribute to climate change, and requiring the gas industry to adhere to critical components of the Clean Air Act, from which they are also currently exempt. Methane leak rates can and should be reduced to well below 1 percent of production.
- **Protecting communities and residential areas** by requiring industry to move fracking operations further away from homes and schools, strengthening restrictions on noise and traffic, and giving municipalities the right to use their powers to control where and how oil and gas operations occur.
- **Protecting wilderness on federal public lands**, which involves reforming policies for natural gas development on federal public lands, including new protections for wildlife habitat, air and water resources, the climate, and human health.
- **Disposing of hazardous fracking waste properly**, meaning that it should be required for all fracking waste to be subject to the hazardous waste provisions of the Resource Conservation and Recovery Act, like other hazardous waste.
- **Requiring public disclosure of chemicals** used throughout the extraction process and including the industry in the Environmental Protection Agency's (EPA) Toxics Release Inventory, which will educate communities about toxic substances on drilling sites being used in their community.
- **Developing robust scientific research on the health and environmental impacts** associated with natural gas production, and the options for preventing them.
- **Requiring air and water quality baseline testing and monitoring**, assessing the potential for exposure to harmful substances, tracking health outcomes, and including full consideration of health impacts in environmental impact studies.
- **Enhancing enforcement of the laws and safeguards**, including establishing meaningful penalties for breaking the law and creating whistleblower protections. This also includes ensuring adequate resources for regulators and inspectors, and requiring workers to report any error, accident, violation of requirements, irregular practice, or activity that otherwise jeopardizes safety and environmental protection.

SHOULD CERTAIN PLACES BE SET OFF LIMITS?

Yes. Some places are simply too risky or sensitive to allow fracking to move forward, regardless of the safeguards in place.

For instance, fracking must not take place near drinking water supplies. Adequate setbacks must be required to protect all public and private drinking water supplies. The cost and scale of an accident affecting water systems for large metropolitan areas could prove massive and irrevocable. An accident in the New York City drinking water supply alone, for example, could threaten the safe drinking water for nine million New Yorkers, as well as millions more in Philadelphia and parts of New Jersey.

States also need to ensure that adequate buffer zones are established around homes, private drinking water wells, schools, and other vulnerable community resources to protect against negative impacts of fracking, including noise, air pollution, soil contamination, surface water contamination, vibrations, and obtrusive lighting.

Additionally, part of our identity as a nation is tied to the preservation of wild lands untouched by humans, including wilderness and roadless areas. These areas provide invaluable benefits to local communities as well as tourists and visitors from around the world. Whether these irreplaceable resources exist on land, off our coasts, or deep in the ocean, they should be protected from drilling. We should not sacrifice our most important values to obtain natural gas or any other form of energy.

CONCLUSION

Americans have a right to clean water when they turn on their tap. They have a right to breathe clean air. They have a right for their voice to be heard. And they have the right to stand up when they have been wronged.

Our leaders must prioritize more efficient, cleaner, safer, and renewable sources of power that move us away from reliance on all fossil fuels. We should be sure that natural gas is being used to replace dirtier fuels, such as coal, by prioritizing renewable power sources and energy efficiency, implementing recent clean air standards, like those for mercury and sulfur, and setting strong power plant carbon pollution standards.

Strong state and federal safeguards are essential to ensure that any natural gas development occurs as safely as possible, and avoids our most sensitive lands. Where federal and state agencies are not doing enough, local governments should have the authority to protect their citizens, communities, and quality of life. NRDC opposes expanded fracking until effective safeguards are in place. Please see: <http://www.nrdc.org/energy/gasdrilling/>.