

Let's BAN Fracking Michigan

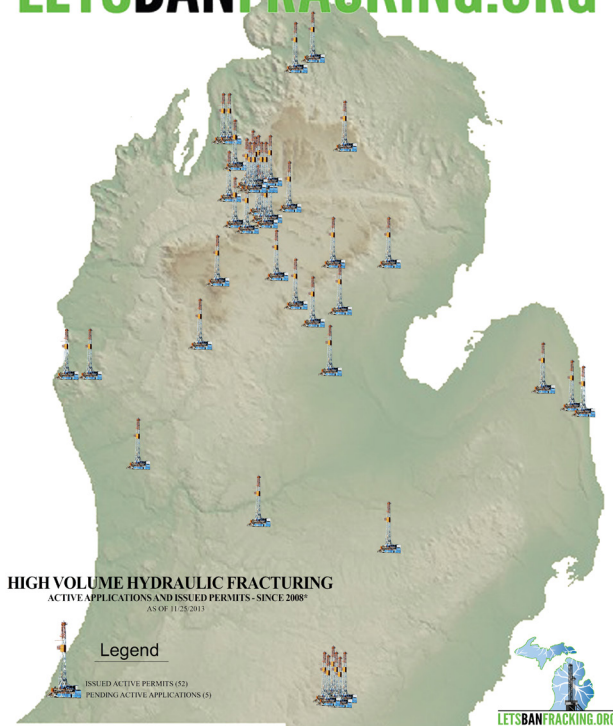


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What fracking is, how it is harmful, and why we must ban it

High volume horizontal hydraulic fracturing — commonly called *fracking* — was developed in the late 1990s.¹ After drilling the well several miles underground, first vertically and then horizontally, companies mix chemicals — many of them cancer-causing or neurotoxic — with millions of gallons of water and sand, then blast the mixture underground under intense pressure to break up deep shale or other rock formations and extract oil and natural gas.

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Michigan has already started this new kind of drilling — fracking — in the Utica/Collingwood shale and A-1 Carbonate formations. The first such high volume well was completed in Michigan in 2010 in Missaukee County. Approximately 57 wells were permitted from 2010 through the beginning of 2014, of which 10 are producing.² This new technique bears little resemblance to earlier fracking.

Only a ban can protect us

There is ample scientific evidence that no extreme energy extraction can be made safe. Fracking is inherently destructive to human health and the environment and has already done extensive damage in the 15 or so years it has been going on in the U.S. You'll hear that the industry is "well-regulated" and that improved regulations are the answer. But regulations are simply legal permission to allow a polluting industry to operate, and the instructions to do so. Some regulations attempt to mitigate some harm but allow the frack industry to continue nonetheless. A ban actually *protects* us by preventing the harm in the first place.

In Michigan law, the Department of Environmental Quality (DEQ) Office of Oil, Gas and Minerals is required to "foster the development of the industry along the most favorable conditions" to maximize oil and gas production.³ With a law like that on the books since the 1930s, it's no wonder that the DEQ is a captured agency, required to work hand-in-glove with the gas industry. The state receives 5% of gross cash market value of the production of gas and 6.6% of oil.⁴ In addition, companies engaged in fracking gave more than \$5 million to state lawmakers to "ignore the dangers of fracking and embrace its expansion."⁵

The Committee to Ban Fracking in Michigan seeks to ban this practice to protect our state, our health and our planet from the devastation and suffering caused by the frack industry. Read on to learn about these harms and how we can ban fracking through the ballot initiative process.

The gas and oil industry's fairy tale

"'Fracking' is not new," says the gas and oil industry and the Michigan DEQ. "We've been doing it safely for over 60 years, with no contamination or harm. We have great regulations and we enforce them all, most of the time. But we can tweak them a bit if it makes people feel better. We need fracking to give us energy independence from foreign sources. Fracking brings lots of local jobs, and natural gas is cleaner than coal. There is no proof of water problems or health issues."

Sounds great, yes? These statements are part of a great fairy tale perpetuated by the oil and gas industry worldwide, repeated by the DEQ, and frequently passed on by the media without question or research. Science and the facts tell a very different story.

¹ *Unearthed: The Fracking Facade*, documentary film, (starting at 3:40 mins). <https://www.youtube.com/watch?v=IPIEzSwPwT0>

² http://www.michigan.gov/documents/deq/High_Volume_Hydraulic_Fracturing_Activity_MAP_423435_7.pdf Last accessed 5/29/14.

³ [MCL 324.61502](#).

⁴ Michigan Revenue Act, [MCL 205.303](#).

⁵ Common Cause, *Deep Drilling, Deep Pockets, in Congress and Michigan*. November 10, 2011, 19.



THE MANY HARMS OF FRACKING

Water is contaminated

Vast amounts of water are required throughout the drilling and fracking process. Michigan, with more private groundwater drinking wells than any other state,⁶ is using more water per frack well than any other state. One frack well used 21 million gallons⁷ and some new applications seek 35 million gallons for each well, with several such wells on one pad. Multiplied by the thousands of new frack wells that the industry would like to place throughout the Lower Peninsula, that adds up to a lot of water. As much water would be used by just 17 new horizontal high-volume wells as all 12,000 mostly Antrim-shale wells over the past 60 years combined. Industry takes this public resource that sustains life, and intentionally poisons it with chemicals. Water used for fracking is destroyed, forever lost to the hydrologic cycle.

Given these massive amounts of water, the amount of chemicals used is also enormous. Just one well using 35 million gallons of water would require about 175,000 gallons of chemicals. Toxic chemicals are used at every stage of development to reach and release the gas. More than 900 products using over 600 chemicals have been identified including the BTEX group — benzene, toluene, ethylbenzene, and xylene — as well as lead, methanol, and 2-butoxyethanol. We are not allowed to know what some of these chemicals are, as the industry calls them “trade secrets.” Of the chemicals known to be used in fracking, 75% could affect the skin, eyes and respiratory and gastrointestinal systems, 40-50% could affect the brain and nervous system, immune and cardiovascular systems, and the kidneys, 37% could affect the endocrine system, and 25% could cause cancer and mutations.⁸



An injection well in Mayfield Township, Grand Traverse County.

Toxic wastes created

Fracking operations are highly industrial processes that create huge amounts of contaminated waste. Drilling muds and cuttings, though toxic, are solidified on site or brought to landfills.⁹ ¹⁰ The water-sand-chemical mixture used for fracking that partially comes back up as “flowback” (and later as liquid waste that the gas industry calls “produced water”), is so poisonous it is stored in tanks until trucked to injection wells and put underground, supposedly “forever.” These wastes contain

all of the toxic chemicals originally added plus naturally occurring radioactive materials, heavy metals, arsenic and other harmful substances. Michigan has 1,460 Class II injection wells. With increased fracking in and out of Michigan, more injection wells will be needed to handle the ballooning frack waste burden, with wastes likely being brought here from fracking elsewhere.¹¹ Well structures — the cement and steel casing barriers between the drilled frack well or injection well and our aquifers — are known to fail at rates of about 5% right after drilling. More fail later, and *most fail eventually*. Well casing and cement failures lead to contaminated water and methane leaks.¹² In addition to the toxic frack well and injection well sites, the complexes include compressor stations and processing facilities which also discharge waste into the air, including nitrogen oxides, carbon monoxide, volatile organic compounds, particulate matter, formaldehyde, sulfur dioxide, and methane. Injection wells, and now frack wells, have been shown to cause earthquakes in Ohio.¹³ There has been an increasing number of earthquakes in several states with fracking.

Fracking worsens global warming

Natural gas (which is mostly methane), is promoted by some as a “bridge fuel” we can use instead of coal and oil before switching someday to renewable energy. Yet methane is now known to be the second largest contributor to human-caused global warming after carbon dioxide.¹⁴ It is a more potent greenhouse gas, retaining more heat in the short term, than carbon dioxide — 86 times more over 20 years and 125 times more over 10 years.¹⁵ Methane emissions occur throughout the extraction life cycle of fracking, much of it unfixable. The greenhouse gas footprint is now, and unless curtailed will remain, so large that scientists studying methane emissions conclude that fracking for natural gas is a “bridge to nowhere,” increasing global warming on a scale worse than coal and oil.¹⁶ ¹⁷ Fracking, even “regulated” fracking, displaces the roll-out of renewables which climate scientists tell us must begin rapidly — now — in order to avoid catastrophic climate impacts.

6 Penn State Extension, *A Guide to Private Water Systems in Pennsylvania*, 2009, 8.

7 “Michigan’s 21-Million Gallon Frack Job: A National Record?” Ban Michigan Fracking, February 5, 2013. <http://banmichiganfracking.org/?p=1483>.

8 Colburn, Theo et al, “Natural Gas Operations from a Public Health Perspective,” *International Journal of Human and Ecological Risk Assessment* 17:1039-1056 (2011): doi:10.1080/10807039.2011.605662; The Endocrine Disruption Exchange, <http://endocrinedisruption.org>.

9 Melissa Belcher and Marvin Resnikoff, *Hydraulic Fracturing Radiological Concerns for Ohio*, June 2013. Fact sheet prepared for Freshwater Accountability Project Ohio.

10 http://www.michigan.gov/deq/0,4561,7-135-3311_4111_4231-9171--,00.html.

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THE MANY HARMS OF FRACKING

Health impacts of fracking

The frack industry harms human and animal health.¹⁸ Scientific studies are now catching up to document the nightmare people are experiencing.¹⁹ The exposure pathways are water, air and soil. Studies show high levels of toxic compounds in the air and water. Recent studies found that people living within a half mile around frack industry sites are at greater risk for cancer,²⁰ and birth defects increase within ten miles.²¹ Symptoms health professionals observe in Pennsylvania include skin rash, nausea, vomiting, cough, abdominal pain, breathing difficulties, nosebleeds, stress and nervous system problems including headache and dizziness, and eye and throat irritation.²² A jury awarded a Texas family nearly \$3 million in a landmark victory in 2014 for their illnesses suffered due to pollution caused by nearby drilling operations, believed to be the first case whereby harmed plaintiffs refused to settle with a nondisclosure agreement.²³ A compiled list of those harmed by the frack industry has now grown to 6,000 nationwide.²⁴ People are leaving their homes due to lack of drinkable water, air contamination, and ill health. Michigan is a high hydrogen sulfide (H₂S) area. When this deadly gas escapes during extraction, it endangers entire communities and workers alike.²⁵ People are permanently poisoned by exposure to H₂S.²⁷

Property loses value

If you are a property owner seeking income from signing a lease to drill on your land — think again. First of all, your property value goes down immediately. A spill will end any chance for organic farm certification. Many banks no longer give mortgages or loans on land that is leased for fracking.²⁸ Insurance companies are canceling homeowner policies and will not cover the damage. Whole neighborhoods lose value when anyone allows drilling. Royalties can not compensate for this loss. When water or land become contaminated, your property is likely not salable.

Fracking for overseas markets

While the industry and our leaders from the president on down tell us we have 100 years of natural gas and we are on our way to energy independence with fracked gas, the truth

is that most fracked gas is destined for shipping overseas to Europe and Asia where there is maximum profit and need. What is missing now are the pipelines, refineries and liquified natural gas terminals to move it out of the country. As soon as these are in place, more wells will come into production, export will expand and prices here at home will rise as our supplies dwindle.²⁹ Regulations are not going to change the rules of global market economics. This is not sustainable, lasting energy independence. The fossil fuel frack industry is boom-bust, leaving communities with contamination, health impacts and worse global warming.

Impacts on jobs

Most fracking jobs are precarious and short-term. Workers are rarely from Michigan. The industry uses a national or international pool of experienced workers.³⁰ They stay in “man camps” and add to social problems. Rents skyrocket, STD cases and crime increase, and demands on health and social services increase.³¹ Once temporary workers leave, the toxic infrastructure is left. Industry jobs data do not take into account the number of jobs lost in agriculture and tourism after the land and water are destroyed or jobs created in alternative energy fields if fracking is banned.



Frack well on Ogemaw County farm land.

Food and fracking don't mix

Fracking contaminates our food system.³² Farmland, now converted to industrial land use, becomes fragmented and loses productivity. Water and soil become contaminated for crops. Poisoned animals sicken and die.³³ Wastes laden with radioactive material and heavy metals are brought to the surface. Toxins and carcinogens become part of our food.

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WHAT IS THE “BAN FRACKING” BALLOT INITIATIVE?

The only way we can ban fracking is if we write the law to prohibit it. We can ban fracking and frack wastes statewide through a *ballot initiative*. **The Committee to Ban Fracking in Michigan** is a *ballot question committee* registered with the Michigan Bureau of Elections. We are non-partisan, grassroots and citizen-led. Our proposal will go on a statewide ballot for Michigan voters to decide. We collected a significant number of signatures in 2013, largely by volunteers. We will begin a new signature-gathering phase when we raise the funds to allow us to hire additional support of paid circulators, to collect all the necessary signatures to get on the 2016 ballot.

The ballot proposal will ban horizontal fracking, and prohibit wastes from horizontal fracking from being produced, stored, processed or disposed of in Michigan. It will also eliminate existing statutory language that requires the Michigan Department of Environmental Quality to “*foster the development of the [gas and oil] industry along the most favorable conditions and with a view to the ultimate recovery of the maximum production*” of oil and gas. In its place is a requirement that DEQ construe the statute to protect human health and water. For the full ballot language, see www.letsbanfracking.org.

WHY A BALLOT INITIATIVE?

Citizen-led ballot initiatives and referenda, often called “direct democracy,” got their start during the Progressive Era, a period of social activism and political reform in the U.S. that flourished from the 1890s to the 1920s. The era was marked by reforms aimed at breaking concentrated monopoly power of corporations and trusts. Many Progressives felt that state legislatures were part of this problem, and in the pocket of the wealthy. They created the *initiative* (creating or amending laws) and *referendum* (repealing a law already enacted) as a way all voters can participate in creating laws directly.

HOW AN INITIATIVE WORKS

Statutory or *legislative initiative* is defined by section 9 of article 2 of the Michigan state constitution as the people’s power “to propose laws and to enact and reject laws.” It is invoked by filing petitions containing signatures of registered voters of at least 8% of the total votes in the last election for governor. Once enough valid signatures are collected the legislature must enact the proposal without modification or reject it within 40 session days. If the legislature rejects it or fails to act, the proposed legislation goes to a vote of the people. The governor cannot veto a law enacted this way. It becomes the new law of the land,

replacing and extinguishing any previous language to the contrary (unlike a referendum). The legislature cannot amend or repeal it, except at a subsequent session, and then only by a supermajority 3/4 vote in both the Michigan house and senate.

WHAT YOU CAN DO

Donate to the campaign to ensure that we grow our movement to get on the ballot *and win*. Your contribution goes directly to campaign activities — signature collecting and verification, educational materials, website, advertising, social media and get-out-the-vote.

Endorse and ask a local organization to endorse.

Spread the word by talking with people, and helping with visibility and tabling events.

Help fundraise by getting involved in official committee fundraisers.

Collect signatures when we begin signature-gathering.



Yes, I'd like to contribute!

*Name _____

*Street address _____

*City _____ *State ____ *Zip _____

*Occupation _____

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Contributions are *not* tax-deductible.

* Required by campaign finance law.

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