

Ban Horizontal Fracking

- *Horizontal fracking has been banned in France, Bulgaria and 3 Canadian provinces.
- *Fracking has been banned in Vermont.
- *New York has issued a moratorium on its use.
- *Over 400 municipalities across the country have passed resolutions banning or restricting the use of fracking.
- *Citizens groups in every state where fracking takes place are organizing against its use.
- *We call on our Governor and legislators to protect our health, economy and environment and BAN horizontal fracking in Michigan.

What You Can Do

- *We must work together to BAN horizontal fracking in Michigan.
- *Write to your legislators and Governor, and make your views known to candidates running for public office.
- *Talk to your friends and neighbors; organize discussions on fracking at your home or community center.
- *Share this brochure and educational materials from our website and other sources.
- *Write a letter to the editor to your local newspaper.
- *Together we can make a difference.

About Us

- *Don't Frack Michigan is a grassroots group of concerned citizens who oppose the use of horizontal fracking.
- *For more information and sources go to www.DontFrackMichigan.org.
- *Donations can be sent to:
Don't Frack Michigan,
P.O. Box 65, Afton, Mich. 49705

Save Our Water

Record volumes of water mixed with toxic chemicals are used to frack wells in Michigan.



- *Watch the water cascade over Tahquamenon Falls for 1 hour and 10 minutes.
- *That represents 20 million gallons, the amount of water contaminated and gone from the hydrologic cycle, which was used to frack one well.

Ban Fracking in Michigan

www.DontFrackMichigan.org

What is fracking?

- *Horizontal hydraulic fracturing or "fracking" injects huge volumes of water, chemicals and sand 10,000 feet underground at high pressure to create fractures through which methane gas or oil can flow for collection.
- *Fracking has been utilized in Michigan for sixty years. However horizontal large volume hydraulic fracking is a new technology and significantly more dangerous.
- *Every state involved with horizontal fracking, from New Mexico to Pennsylvania has experienced serious damage to drinking water, human health, livestock and wildlife, freshwater aquifers, rivers, and air quality.



Water Contamination

- *National records for water use and contamination are being set in Mich.
- *Over 20 million gallons of water mixed with toxic chemicals were used by Encana Oil and Gas Corp. to frack just one well. They have received permits to use and contaminate upwards of 35 million gallons.
- *Such rapid massive water withdrawal depletes groundwater, affecting lakes, streams, aquatic life, and homeowner wells.
- *Plans to drill hundreds of wells in our state will affect groundwater which flows into our Great Lakes.
- *A large percentage of this contaminated water returns to the surface (called flowback). Too toxic to be used for other purposes, it cannot be returned to the watershed and is disposed of in injection wells.

Toxic Chemicals

- *Hundreds of thousands of gallons of chemicals are used to frack a well. Many are known toxins that, even when measured in parts per billion, cause skin rashes, nosebleeds, headaches, breathing problems, brain damage, birth defects, cancer, and heart and lung disease.



Exemptions and Subsidies

- *Horizontal fracking is profitable because of industry exemptions from environmental laws. An amendment to the 2005 energy bill (Halliburton Loophole) stripped the EPA's authority to regulate fracking through the Safe Drinking Water Act.
- *In Michigan, corporations lease mineral rights on our State forestland at rock-bottom prices for fracking.
 - *They clear-cut forests and destroy wetlands to build well pads and pipelines.
 - *They take the water for free, and are setting national records for water use and contamination.
 - *Every time they frack a well, millions of gallons of groundwater are contaminated with chemicals and removed from the hydrologic cycle.

Injection Wells

- *Millions of gallons of flowback fluid (called "produced water") must be disposed of in injection wells, typically 2,000 - 4,000 feet underground.
- *Flowback fluid contains not only the chemicals used to frack the well, but also heavy metals, hydrocarbons and radioactive elements, which are naturally occurring in deep shale formations.
 - * These previously deeply buried carcinogens along with millions of gallons of flowback fluid will now be pumped into much more shallow rock formations for disposal through injection wells.
- *In Arkansas, Oklahoma, Texas, Ohio this type of disposal has resulted in huge spikes in earthquake activity. Two fault lines run through northern Michigan. Even small earthquakes can create a conduit for upward migration of these toxic fluids.
- *Thousands of previously drilled wells in northern Michigan, some of which are being converted into hazardous waste injection wells, could act as a conduit for the upward migration of toxic fracking wastes and pollute ground water.

Trucking, Transport Accidents

- *Production traffic is continuous, competing with school buses and local emergency vehicles.
- *Accidents have occurred in every state where fracking is used, including chemical fires, explosions, spills and traffic accidents. Local taxes will pay for increased emergency response needs.
- *Three major train derailments in 2013 (transporting oil from fracking) resulted in explosions, loss of life and evacuation of nearby residents.
- *Pipeline leaks and explosions are becoming commonplace around the country and are contaminating drinking water sources, farmland and our environment.



Waste

- *Fracking in North Dakota is done for oil. It is more profitable than gas. Gas comes up with the oil and is burned (flared) into the atmosphere as a waste product.
- *Meanwhile, in Michigan gas companies clear-cut our state forests and destroy massive quantities of fresh water to frack for the same gas that is flared into the atmosphere as a waste product in North Dakota.
- *Water shortages and droughts are becoming commonplace. We should not allow our precious freshwater to be poisoned and destroyed.

Economy

- *Drilling causes nearby home values to plummet. Mortgages are increasingly being denied to people who do not own their mineral rights.
 - *Extensive clear cutting, 24-hour noise and light pollution, industrialization of rural, forested and agricultural lands have a devastating effect on farming, recreation and tourism, upon which our northern Michigan economy is based.
- *Fossil fuel costs to consumers are rising as gas and oil reserves become increasingly difficult to extract.
 - *Solar and wind costs are going down as the technology improves. Jobs in the renewable energy sector are growing.
- *We call on our Governor and legislators to end subsidies to gas and oil companies and develop a renewable, sustainable energy policy that can protect our water, environment, health and economy.***