

Fracking ~

The term for horizontal hydraulic fracturing - is a process for extracting oil or gas trapped in shale rock deep inside the earth.

A well is drilled and millions of litres of water mixed with sand and as many as 800 chemicals are injected down bore holes under very high pressure to open up fractures in the rock so the oil or gas can flow out and be pumped to the surface.

Some of the chemicals mixed in the water are known to cause cancer (carcinogens) and are neurotoxins and so are very harmful to all life forms.

The water contaminated by the process either stays in the ground or, if recovered, has to be shipped over land and water bodies before being stored. Fracking water is permanently removed from the natural environment. It is not known if – more likely, when, the contaminated water will leach into the groundwater.

Dwayne Wohlgemuth

Get involved

Petition

Join us in calling on the Government of the Northwest Territories to place a moratorium on fracking until a comprehensive, transparent and public review of the cumulative environmental, social and economic risks and benefits of the process is completed. To sign the petition:

1. go to frackingactionnorth.ca
2. click on the 'SIGN THE PETITION' link on homepage

Learn more about fracking

Visit the FAN website to read more about fracking and the many ways it can impact our land, air, water, wildlife and families.

Help FAN spread the word

Join like-minded people in your community spreading the word about fracking and what it might mean to the north. Get in touch by visiting the FAN website and going to 'Contact'.

Donate to FAN

Funds are used to maintain the FAN website, produce educational materials and hold public events.

Fracking Action North (FAN)

FAN is a coalition of NWT organizations and individuals concerned that the impacts of hydraulic fracturing have not been properly assessed in the NWT.

Coalition Member Organisations:

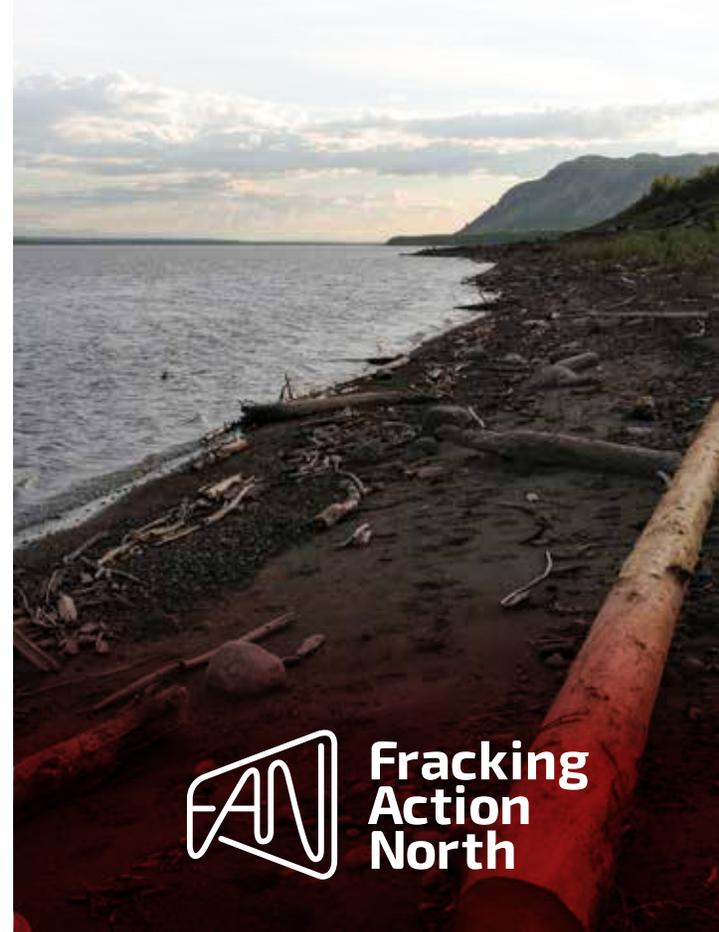
Alternatives North
www.alternativenorth.ca

Ecology North
www.ecologynorth.ca

The NWT Chapter of the Council of Canadians
www.cocnwt.ca

Canadian Association of Physicians for the Environment
www.cape.ca

What Your Health Needs to Know About Fracking



 **Fracking Action North**



Leanne Robinson

Environmental impacts of shale gas extraction in Canada

In 2014, the Council of Canadian Academies, Canada's most authoritative, independent scientific body, issued a report called, "Environmental Impacts of Shale Gas Extraction in Canada" (1). The report concluded:

- "[T]here is reason to believe that shale gas development poses a risk to water resources, but the extent of that risk, and whether substantial damage has already occurred, cannot be assessed because of a lack of scientific data and understanding."
- "Exposure to air pollution associated with shale gas may lead to a small increase in the risk of cancer and other diseases such as neurological and respiratory effects for people living in close proximity to a well."
- "Public Health Surveillance, leading to epidemiological studies, or rigorous health impact assessments of shale gas extraction activities, have not been conducted."

Council of Canadian Academies:
<http://www.scienceadvice.ca/en/assessments/completed/shale-gas.aspx>

How horizontal hydraulic fracturing (fracking) impacts human health?

- What are the effects of fracking on human health?
- What are the effects of fracking on air and water quality?
- Has enough research been done on the long-term effects of fracking... or are we still guessing?

Evidence that fracking damages health and water is growing

Modern fracking has existed for only approximately 20 years in the U.S. and 10 years in Canada (1). Research into the human health effects of fracking has been lagging technological development but is now starting to catch up.

- Chemicals mimicking or blocking those of human sex hormones like estrogen and testosterone (endocrine-disrupting chemicals) have been found in river water downstream from fracking activities in the Colorado River Basin (2).
- Air concentrations of volatile compounds near oil and gas production such as benzene, formaldehyde and hydrogen sulfide frequently exceed health-based risk levels (3).
- Pregnant women living near natural gas development in rural Colorado were more likely to have babies with congenital heart disease and neural tube defects (4).

A growing list of jurisdictions have put health first and banned or placed a moratorium on fracking

- Quebec - moratorium on hydraulic fracturing (2011)
- Newfoundland - moratorium on hydraulic fracturing (2013)
- Nova Scotia - ban on high-volume on-shore hydraulic fracturing (September 2014)
- New Brunswick - moratorium on shale gas development (December 2014)
- New York State - ban on hydraulic fracturing (December 2014)

References:

- (1) Council of Canadian Academies. 2014. <http://www.scienceadvice.ca/en/assessments/completed/shale-gas.aspx>
- (2) Kassotis, et al. 2013. Estrogen and androgen receptor activities of hydraulic fracturing chemicals and surface and ground water in a drilling-dense region. *Endocrinology*. <http://dx.doi.org/10.1210/en.2013-1697>
- (3) Macey et al. 2014. Air concentrations of volatile compounds near oil and gas production: a community-based exploratory study. *Environmental Health* 13:82 <http://www.ehjournal.net/content/13/1/82>
- (4) McKenzie LM et al. 2014. Birth outcomes and maternal residential proximity to natural gas development in rural Colorado. *Environmental Health Perspectives*. <http://dx.doi.org/10.1289/ehp.13067222>