

4. Water Use in Hydraulic Fracturing

Hydraulic fracturing fluid is approximately 99% water and sand, and 1% additives. In 2013, a total of 5.3 million cubic metres of water was used for hydraulic fracturing in British Columbia.

This is a small amount of water when compared to other water uses such as agriculture, manufacturing and municipal water supply. For perspective, consider:

- The natural gas industry uses less than half of 1% of the annual water runoff (the amount of water that flows into rivers and lakes yearly) in northeastern B.C. for hydraulic fracturing.
- The hydraulic fracturing process lasts only a few weeks. It opens a well that will likely produce gas for 20 to 30 years.
- Water used for hydraulic fracturing can be recaptured and reused in another natural gas well. This eliminates the need to use new, fresh water.

By 2019, drilling operations could peak in the province with 2,100 wells using 43 million cubic metres of water. Despite this increase, the amount of water required would still be less than 0.04% of today's annual water runoff in northeastern B.C.

Operators are also using less fresh water than before. Companies in B.C. are using deep, undrinkable, saline water, as well as recycled water, for hydraulic fracturing.

Strict Regulations

Water use for oil and gas development is strictly regulated:

- The BC Oil and Gas Commission carefully monitors the amount of water available and allocates it to industry. Ecological and community needs are met first.
- Natural gas companies must get permission before using any new water supply. Permission can be granted by a permit (two years or less) or by a licence for long-term needs. All applications are thoroughly reviewed by technical experts.
- Companies must report how much water they actually use. The information is publicly available online at FracFocus.ca
- In case of water shortages (such as droughts in northeastern B.C. in 2010, 2012 and 2014), water withdrawals from rivers and lakes can be suspended.

Points to consider:

- Identify the water users in your area (e.g. communities, industry, agriculture). Consider the impact they have – on the water supply, on the environment and on meeting the needs of British Columbians (e.g. jobs, goods and services).
- How would you prioritize water use in British Columbia?

Dig a little deeper:

- In 2013:
 - Metro Vancouver used approximately 365 million cubic metres of treated water.
 - Hydraulic fracturing in B.C. used 5.3 million cubic metres of water.
- In northeastern British Columbia, annual runoff averages 120.6 billion cubic metres. Runoff is the rain, snow or ice water that drains into lakes and rivers over the year.